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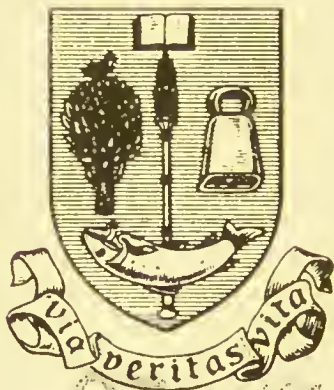
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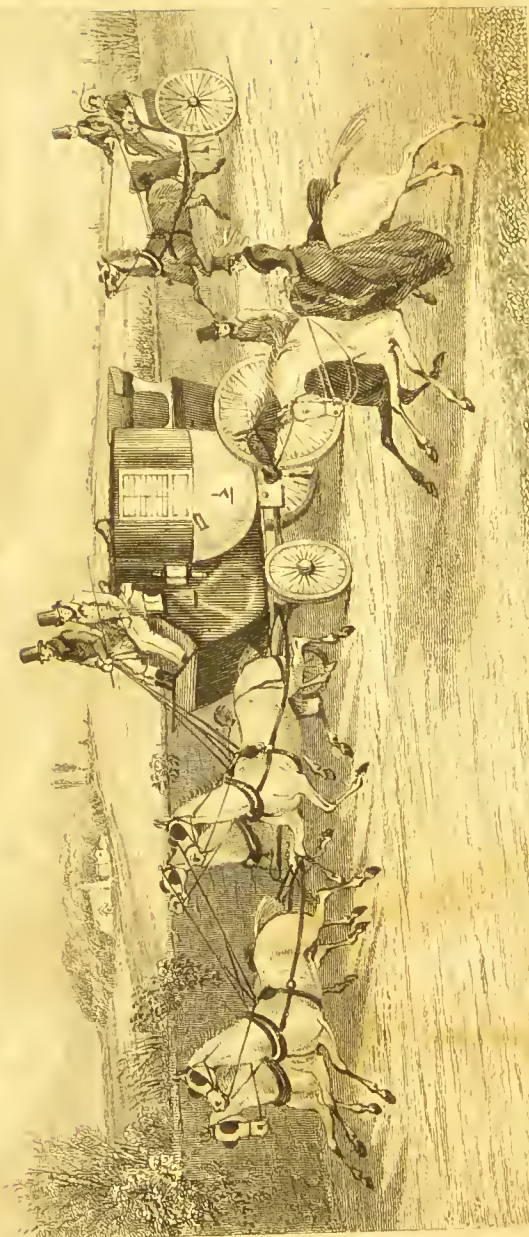
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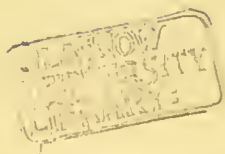




BRITISH
MANLY EXERCISES,
CONTAINING
ROWING AND SAILING,
RIDING & DRIVING, &c. &c.
BY
DONALD WALKER.



LONDON.
T. HURST, 65. PAULS CHURCH YARD.
1834.



BRITISH
MANLY EXERCISES.



BRITISH
MANLY EXERCISES:

IN WHICH
ROWING AND SAILING

ARE NOW FIRST DESCRIBED;

AND
RIDING AND DRIVING

ARE FOR THE FIRST TIME GIVEN IN A WORK OF THIS KIND;

As well as the usual subjects of

WALKING,	BALANCING,	WRESTLING,
RUNNING,	SCATING,	BOXING,
LEAPING,	CLIMBING,	TRAINING,
VAULTING,	SWIMMING,	&c. &c. &c.

BY DONALD WALKER.

LONDON:
T. HURST, 65, ST. PAUL'S CHURCH-YARD.

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ADVERTISEMENT.

THE title of this work expresses its most striking peculiarity—in giving an account of ROWING and SAILING, for the first time in any work, and introducing RIDING and DRIVING, for the first time in a work of this kind.—As these are perhaps the most important subjects of the work, and as they are, in their greatest excellence, peculiar to this country, the work has been called BRITISH EXERCISES.

Independently of this, the *analysis* and the *method*, the *accuracy*, the *brevity* and the *clearness*, with which, it is hoped, the work is constructed, will probably distinguish such even of

its subjects as are less new from most of the accounts given by others, whether in separate or collected treatises. With this view, no pains have been spared in improving the arrangement and composition of existing materials.

It is here necessary only to add a few words as to some of the subjects introduced.—*Boxing* is given only as the most valuable exercise in relation to the chest and lungs, and, in case of emergency, for self-defence, but by no means in approval of prize-fighting. *Wrestling* is given with similar views, which have secured to it the approbation both of ancient and modern times. *Training* is essential to all exercise — nay, it supersedes medicine by banishing disease, as shown by Asclepiades, and a thousand others. *Four-in-hand* is given as the perfection of driving (for to the highest excellence in every art we should look), and this art need not be lost sight

of, till, according to the promise held out, steam has superseded the usual mode of travelling, and horses are to be found only as specimens in the Zoological Gardens!

Throughout the work, useful exercises alone are given, and mere pastimes are excluded—it is hoped not unwisely, in an age when, even with all the improvement of our methods, the acquirements necessary to the highest degree of bodily and mental accomplishment, are sufficiently numerous to occupy the period of life which is devoted to them.

D. W.



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THEIR GENERAL UTILITY will be questioned only by those who are not aware, that the health and vigour of all the bodily organs depend on the proportioned exercise of each.

Exercises ensure, in particular, the development of all the locomotive organs ; and they prevent or correct all the deformities to which these organs are liable. They are best calculated to produce strength and activity, and to bestow invariable health. They, at the same time, confer beauty of form ; and they contribute to impart an elegant air and graceful manners.

They, moreover, inspire confidence in difficult situations, and suggest resources in danger. Their consequent influence on the moral conduct of man is such, that, by a courage which is well founded, because it springs from a perfect knowledge of his own powers, he is often enabled to render the most important services to others.

PECULIARITIES OF THE PRESENT SYSTEM.

We owe it not less to the reader than to ourselves, to point out the peculiarities of the system of Exercises which is here presented to him. These are as follows :

1st. Rowing and Sailing are, for the first time, described ; and Riding and Driving are, for the first time, added to a work of this kind.

Of these exercises, the first and second, as well as many individual parts in others, namely, the Paces in walking, the Rein-hold in driving, &c. are entirely original, there

being (eminently British as these exercises are) no work with which we are acquainted that treats of them.*

2d. All exhibitionary and quackish *preparatory* exercises, as they are termed, are here excluded ; and nothing is introduced which has not a direct, immediate, and obvious purpose—no tick-tack, cross-touch, kissing the ground, goat's jump, spectre's march, &c.

The twelve or fourteen branches of useful Exercises are sufficient to exercise every muscle of the body ; it is the exerciser's fault if they do not this in the most gradual and gentle way ; and, if indeed any muscle remained unexercised by these, infinitely varied as they are, it would not be worth exercising.

3d. Everything is described in the simplest manner, and in as few words as possible—a mode much opposed to that of some works on this subject, the writer's object being to enable any one either to practise these exercises by himself, or to teach them to others.

A comparison with the descriptions of any other general

* Notwithstanding this desire to be original, or rather this necessity for being so, where previous materials were altogether wanting, the author has carefully profited by all the existing works ; as, Gutsuth, Salzmann, and their followers, a Military Officer, Clias, &c. on Gymnastics generally ; Franklin, Bernardi, Frost, &c. on Swimming ; Berenger, Adams, the Manual for Cavalry, &c. on Riding ; and Nimrod, &c. on Driving.—The author makes, once for all, this general acknowledgment : he could rarely indeed have marked quoted passages with inverted commas, as there is scarcely any thing, even in the least original part of the work, which is not greatly abridged, or corrected, or otherwise improved.

work will put this to the test. Indeed, those here given will, in most cases, be found to be so simple and clear as to be intelligible even without a reference to the plates: let this be tried with other works.

GENERAL DIRECTIONS.

It remains for us only to give a few directions as to the time, place, and circumstances of exercises.

The best time for the elementary exercises is when the air is cool, as even in summer it is early in the morning, or after the sun has declined; and they should never immediately follow a meal.

The best place for these elementary exercises is a smooth grass-plot, or a firm sandy sea-beach. Chasms, stones, and stakes, are always dangerous.

At the commencement of such exercise, the coat and all unnecessary clothes should be laid aside; and all hard or sharp things should be taken from the pockets of the remaining dress. A very light covering on the head, as a straw hat, is best; the shirt-collar should be open; the breast should be either exposed, or thinly covered; the waistband of the trowsers should not be tight; and the boots or shoes should have no iron about them.

As sudden transitions are always bad, exercise should begin gently, and should terminate in the same manner.

As the left hand and arm are commonly weaker than the right, they should be exercised till they become as strong.

The being cooled too quickly is injurious. Therefore,

drinking when very hot, or lying down on the cold ground, should be carefully avoided.

No exertion should be carried to excess, as that only exhausts and enfeebles the body. Therefore, whenever the gymnast feels tired, or falls behind his usual mark, he should resume his clothes, and walk home.

The moment exercise is finished, the clothes should always be put on, and the usual precautions adopted to prevent taking cold.

The necessary fittings-up of an exercising ground are a leaping stand, a vaulting horse, a balancing bar, a climbing stand, with ladders, poles, and ropes, which may be seen united as simply and economically as possible, in a subsequent sketch.

WALKING.

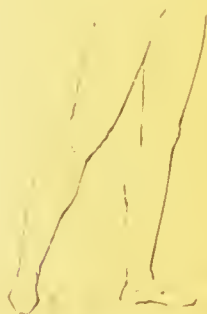
WALKING IN GENERAL.

Of all exercises, walking is the most simple and easy. The weight of the body rests on one foot, while the other is advanced; it is then thrown upon the advanced foot, while the other is brought forward; and so on in succession.

In this mode of progression, the slowness and equal distribution of motion is such, that many muscles are employed in a greater or less degree; each acts in unison with the rest; and the whole remains compact and united. Hence, the time of its movements may be quicker or slower, without deranging the union of the parts, or the equilibrium of the whole.

It is owing to these circumstances, that walking displays so much of the character of the walker,—that it is light and gay in women and children, steady and grave in men and elderly persons, irregular in the nervous and irritable, measured in the affected and formal, brisk in the sanguine, heavy in the phlegmatic, and proud or humble, bold or timid, &c. in strict correspondence with individual character.

The utility of walking exceeds that of all other modes of progression. While the able pedestrian is independent of stage-coaches and hired horses, he alone fully enjoys the



5



6



Walking.



scenes through which he passes, and is free to dispose of his time as he pleases.

To counterbalance these advantages, greater fatigue is doubtless attendant on walking: but this fatigue is really the result of previous inactivity; for daily exercise, gradually increased, by rendering walking more easy and agreeable, and inducing its more frequent practice, diminishes fatigue in such a degree, that very great distances may be accomplished with pleasure, instead of painful exertion.

In relation to health, walking accelerates respiration and circulation, increases the temperature and cutaneous exhalation, and excites appetite and healthful nutrition. Hence, as an anonymous writer observes, the true pedestrian, after a walk of twenty miles, comes in to breakfast with freshness on his countenance, healthy blood coursing in every vein, and vigour in every limb, while the indolent and inactive man, having painfully crept over a mile or two, returns to a dinner which his stomach cannot digest.

A firm, yet easy and graceful walk, however, is by no means common.

THE POSITION AND THE THREE PACES IN WALKING.

In all walking, the position is nearly the same; but it may be performed in three different times—slow, moderate, or quick, which somewhat modify its action, and of which gymnasiarchs have described only the first.

POSITION IN WALKING.

The head should be upright, easy, and capable of free motion, right, left, up, or down, without affecting the po-

sition of the body. The latter should be upright, having the breast projected, and the stomach retracted, though not so as to injure either freedom of respiration, or ease of attitude. The shoulders should be kept moderately and equally back and low; and the arms should hang unconstrainedly by the sides. The knees should be straight; the toes should form nearly half a right angle with the line of walk; and the weight of the body should rest principally on the balls of the feet.

THE SLOW WALK, OR MARCH.

This would perhaps, like the others, have escaped the description of gymnasiarchs, if military movements had not rendered such negligence impossible.

In the march, one foot, the left for instance, is advanced, with the knee straight, and the toe inclined to the ground, which it touches before the heel; the right foot is then immediately raised, and similarly advanced, inclined, and brought to the ground; and so on in succession. Care is taken to keep the sole, at the conclusion of the step, nearly parallel with the ground; to touch the ground first with the outer edge; and to rise from the inner edge of the toe. (Plate I. Figures 1 and 2.)

This pace should be practised until it can be firmly and gracefully performed.

THE MODERATE AND THE QUICK PACE.

These will be best understood by a reference to the pace which we have just described; the principal difference

between them being as to the part of the foot which first touches and last leaves the ground, and this being the circumstance in them which has been altogether overlooked.

We have seen that, in the march, the toe externally first touches and internally last leaves the ground; and so marked is this tendency, that, in the stage step, which is meant to be especially dignified,—as the posterior foot acquires an awkward flexure when the weight has been thrown on the anterior,—in order to correct this, the former is, for an instant, extended, its toe even turned backwards and outwards, and its tip internally alone rested on the ground, previous to its being in its turn advanced.—Thus the toe's first touching and last leaving the ground, is peculiarly marked in this grandest form of the march.

We shall find, that the times of the other two paces suffer successively less and less of this extended touching with the toe, and covering the ground with the foot.

THE MODERATE PACE.

Here, it is no longer the toe, but the ball of the foot, which first touches and last leaves the ground; its outer edge or the ball of the little toe first breaking the descent of the foot, and its inner edge or the ball of the great toe last projecting the weight.—(Plate I. Figures 3 and 4.)

Thus, in this step, less of the foot may be said actively to cover the ground; the foot-step is in effect rendered shorter by the difference of the length of the toes; the pace is accelerated just in proportion; and this adoption of nearer and stronger points of support and action is essential to the increased quickness and exertion of the pace.

This pace has never been described either by dancing masters or drill sergeants; nothing quicker than the march has been attended to; people pass from that to the quick pace they know not how; and hence all the awkwardness and embarrassment of their walk when their pace becomes moderate, and the misery they endure when this pace has to be performed by them unaccompanied, up the middle of a long and well-lighted room, where the eyes of a brilliant assembly are exclusively directed to them.—Let those who have felt this but attend to what we have here said: the motion of the arms and every other part depend on it.

THE QUICK PACE.

Here, still nearer and stronger points of support and action are chosen. The outer edge of the heel first touches the ground, and the sole of the foot projects the weight. These are essential to the increased quickness of this pace.—(Plate I. Figures 5 and 6.)

An important remark has yet to be made as to all these paces. The toes are successively less turned out in each. In the grandest form of the march, the toes, as we have seen, are, in the posterior foot, though but for a moment, even thrown backwards; in the moderate pace, they have an intermediate direction, forming nearly half a right angle with the line of walk; and in the quick pace, they are thrown more directly forward.—(See the 6 Figures of Plate I.)

It is this direction of the toes, and still more the nearer and stronger points of support and action, namely the heel

and sole of the foot, which are essential to the quick pace so universally practised, but which, being ridiculously transferred to the moderate pace, make unfortunate people look so awkward, as we shall now explain.

The time of the moderate pace is as it were filled up by the more complicated process of the step—by the gradual and easy breaking of the descent of the foot on its outer edge or the ball of the little toe, by the deliberate positing of the foot, by its equally gradual and easy projection from its inner edge or the ball of the great toe.—The time of the quick pace, if lengthened, has no such filling up: the man stumps at once down on his heel, and could rise instantly from his sole, but finds that, to fill up his time, he must pause an instant; he feels he should do something, and does not know what; his hands suffer the same momentary paralysis as his feet; he gradually becomes confused and embarrassed; deeply sensible of this, he at last exhibits it externally; a smile or a titter arises, though people do not well know at what; but, in short, the man has walked like a clown, because the mechanism of his step has not filled up its time, or answered its purpose.

I trust that *the mechanism and time of the three paces*, are here, for the first time, simply, clearly, and impressively described. I have not seen them even attempted elsewhere, which I think most discreditable to the people whose business it is to teach such things. It becomes indeed of real importance among certain classes of society and in certain situations; and I should be unworthy my name, if I neglected it.

FEATS IN WALKING.

The power of walking great distances without fatigue, is an important matter, in which the English have of late excelled.

A good walker will do six miles an hour for one hour on a good road.* If in perfect training, he may even do twelve miles in two hours. Eighteen miles in three hours, is a much more doubtful affair, though some are said to have achieved it.

At the rate of five miles an hour, pedestrians of the first class will do forty miles in eight hours, and perhaps fifty in ten.†

At the rate of four miles an hour, a man may walk any length of time.

* Seven miles in one hour are said to have been done by some.

† A clever writer in Blackwood's Magazine says, "There can be no doubt that, out of the British army, on a war establishment, ten thousand men might be chosen, by trial, who would compose a corps capable of marching fifty miles a day, on actual service, for a whole week. The power of such a corps is not to be calculated—it would far outgo cavalry."



RUNNING.

RUNNING IN GENERAL.

“Running,” says one of our gymnasiarchs, “only differs from walking by the rapidity of the movements.” This is quite incorrect. Running is precisely intermediate to walking and leaping; and, in order to pass into it from walking, the motion must be changed: a series of leaps from each foot alternately must be performed, in order to constitute it.

POSITION IN RUNNING.

The upper part of the body is slightly inclined forward; the breast is freely projected; the upper parts of the arms are kept near the sides; the elbows are bent, and each forms an acute angle; the hands are shut, with the nails turned inwards; and the whole arms move but slightly, in order that the muscles of respiration on the chest may be as little as possible disturbed, and follow only the impulse communicated by other parts.—(Plate II. Figure 1.)

ACTION IN RUNNING.

At every step, the knees are stretched out; the legs are kept as straight as possible; the feet almost graze the ground; the tread is neither with the mere balls of the toes, nor with the whole sole of the foot; and the spring is made rapidly from one foot to the other, so that they pass each other with great velocity.—(Plate II. Figure 2.)

The degree of velocity, however, must be proportioned

to the length of the steps. Too slow and long, as well as too quick and short, steps, may be equally injurious.

RESPIRATION.

During the whole time of running, long inspirations and slow expirations are of the greatest importance; and young persons cannot be too early accustomed to them.

To facilitate respiration towards the end of the race, the upper part of the body may be leant a little forward.

Running should cease as soon as the breath becomes very short, and a strong perspiration takes place.

MODERATE RUNNING.

This is performed gently and in equal time, and may be extended to a considerable space.

In practising this pace, it is necessary to fix the distance to be run; and this should always be proportioned to the age and strength of the runners.

A moderately cool day may accordingly be chosen; a distance of three hundred feet measured; and the runners placed in a line at one end.

They may then start, trot at the rate of about seven feet in a second to the opposite end, turn, and continue until they reach the spot whence they started.

Frequent repetition of this is sufficient at first. Afterwards, they may run over this space, two, three, or four times without stopping; and the exercise may then be limited to this.

It may, on subsequent days, be extended successively to five, six, and seven times the distance.

Fatigue is then generally quite removed ; and the run may either be continued further, or the runners, if neither heated nor winded, may accelerate their pace.

They may next attempt a mile in ten minutes, and repeat this, till, being gradually less and less heated, they can either extend the distance, or diminish the time, in any measured proportion.

At this pace, six miles may afterwards be run in an hour.

RAPID RUNNING.

This is best applied to a short space in little time.

Three hundred feet upon an open plain will not generally be found too great. At each end of this, a cross line may be drawn ; and the runners may arrange themselves on one line, while the umpire is placed at the other.

On the latter giving the signal, the running commences ; and he who first passes him gains the race.

It is extremely useful always to run beyond the line at a gentler pace, as it gradually lowers the actions of the respiratory and circulating systems.

FEATS IN RUNNING.

The practice of running may be carried to a great degree of perfection.

A quarter of a mile in a minute is good running ; and a mile in four minutes, at four starts, is excellent.

The mile was perhaps never run in four minutes ; but it has been done in four minutes and a half.

A mile in five minutes is good running. Two miles in

ten minutes is oftener failed in than accomplished. Four miles in twenty is said to puzzle the cleverest.

Ten miles an hour is done by all the best runners. Fifteen miles in an hour and a half has never perhaps been done.

Forty miles in four hours and three quarters or less, it is said, was done by one individual.

As to great distances, Rainer failed in two attempts to accomplish 100 miles in eighteen hours. Captain Barclay's walking 180 miles without resting, and also 1000 miles in 1000 successive hours, are sufficiently well known.



Pl. III.



2



Leaping

LEAPING.

LEAPING IN GENERAL.

In leaping, the body is rapidly projected from the ground, chiefly by a sudden extension of the limbs.

The leaping-stand consists of two moveable posts, above six feet high, having, above the second foot from the ground, holes bored through them, at the distance of an inch from each other; two iron pins to be placed in the holes at any height; a cord at least ten feet long, passed over these pins, and kept straight by two sand-bags at its ends; and weights upon the feet of the posts, to prevent them from falling.—(Plate III. Figure 1.)

The leap over the cord, is made from the side of the stand towards which the heads of the pegs are turned; so that if the feet touch the cord, it will easily and instantly fall.

In all kinds of leaping, it is of great importance to retain the breath, as this impels the blood into the muscular parts, and increases their strength. In all, also, the hands should be shut, and the arms pendent.

THE HIGH LEAP.

Without a Run.

In this, the legs and feet are closed; the knees are bent till the calves nearly touch the thighs; the upper part of the body, kept straight, is inclined a little forward; and

the arms are thrown in the direction of the leap, which increases the impulse, preserves the balance, and may be useful in a fall.—(Plate III. Figure 1.)

In descending, the body should be rather inclined forward; and the fall should take place on the forepart of the foot; for the direct descent in this leap, if not thus broken, would send its shock from the heels to the spine and head, and might occasion injury.

To perpendicularity in this leap, should be added lightness, so that scarcely any noise from the leap should be heard.

This leap, without a run, may be practised at the height :

1st. Of the knees ;

2dly. Of the middle of the thighs ;

3dly. Of the hips ;

4thly. Of the lower ribs.

With a Run.

The run preceding the leap should never exceed ten paces.

The distance between the point of springing and the cord, should equal half the cord's height from the ground.

The view of the leaper should be directed first to the spot whence he is to spring; and the moment he has reached that, to the cord.

The leaper should learn to spring from either foot, and from both feet.

The instant the spring is made, or (if it be made with one foot) immediately after, the feet should be closed, and the knees drawn forcibly towards the chin.

Throughout, flexibility and skill, not violent exertion, should be displayed.

This leap with a run, may be practised at the height :

- 1st. Of the hips ;
- 2dly. Of the lower ribs ;
- 3dly. Of the pit of the stomach ;
- 4thly. Of the breast ;
- 5thly. Of the chin ;
- 6thly. Of the eyes ;
- 7thly. Of the crown of the head.

Feats in High Leaping.

A good high leaper will clear five feet ; a first-rate one, five and a half ; and an extraordinary one, six feet.

THE LONG LEAP.

Without a Run.

Here the feet are closed ; the whole weight rests upon the balls of the toes ; and the body is inclined forward.

Both arms are then swung forward,—backward,—then drawn strongly forward,—and at the same instant, the limbs, having been bent, are extended with the utmost possible force.

On level ground, twelve feet is a good standing leap ; and fourteen is one of comparatively rare occurrence.

With a Run.

This leap is best executed with a run ; and we have therefore dwelt less upon the former.

Here also, the body must be inclined forward.

The run should be made over a piece of firm, and not

slippery ground, to the extent of ten, fifteen, or twenty paces ; should consist of small steps increasing in quickness as they approach the point of springing ; and these should be so calculated as to bring that foot upon the point with which the leaper is accustomed to spring.

The spring, as here implied, should be performed with one foot, and the arms should be thrown forcibly towards the place proposed to be reached.

The height, as well as the length of the leap, must be calculated ; for the leap is shortened by not springing a proper height.—(Plate III. Figure 2.)

In the descent, the feet are closed, the knees bent, the upper part of the body inclined forward, and the toes first touch the ground, at which moment, a light spring, and afterwards some short steps, are made in order to avoid any sudden check.

In the most extended leap, however, lighting on the toes is impossible. A sort of horizontal swing is then achieved, by which the leaper's head is little higher than his feet, and his whole figure is almost parallel with the ground ; and, in this case, to alight on the toes is impossible.

Care, however, must here be taken not to throw the feet so much forward as to cause the leaper to fall backward at the moment of descent. The ground must be cleared, or the leap is imperfect and unfair.

This leap may be practised at :

- 1st. Double the length of the body ;
- 2dly. Twice and a half that length ;
- 3dly. Three times that length.

Feats in Long Leaping.

On level ground, twenty feet is a first-rate leap ; twenty-one is extraordinary ; and twenty-two is very rarely accomplished.

With a run and a leap, on a slightly inclined plane, twenty-three feet have been done.

THE DEEP LEAP.

This may be made either with or without the hands.

In either way, to avoid the shock, the body must be kept in a bent position, and the fall must be upon the balls of the toes.

When the hands are used, the leaper places them in front of the feet ; and during the descent, the weight of the body is checked by the former, and passes in a diminished state to the latter ; so that the shock is obviated.

A flight of steps serves the purpose of this exercise. The leaper ascends a certain number ; leaps from the side ; gradually increases the number ; and, by practising progressively higher, finds it easy to leap from heights which at first appalled him.

The leaper afterwards combines the long and deep leaps. For this purpose, a rivulet, which has one bank high and the opposite one low, is very favourable.

VAULTING.

VAULTING IN GENERAL.

In vaulting, by a spring of the feet, the body is raised; and, by leaning the hands upon a fixed object, it at the same time receives, in oblique vaulting, a swing which facilitates the action.

As the inclination thus given to the body in oblique vaulting depends, not merely on the feet, but on the hands, we have the power to guide the body in any direction.

This exercise is conveniently practised on the vaulting bar, which rests upon two or three posts.

Vaulting may be performed with or without running. The beginner may at first be allowed a run of a few paces, ending in a preparatory spring; and he may afterwards be allowed only a spring.

OBLIQUE VAULTING.

Mounting and Dismounting.

To mount, the vaulter must place himself in front of the bar; make a preparatory spring with the feet close; fix at that moment both hands upon the bar; heave himself up; and swing the right leg over. The body, supported by the hands, may then easily descend into the riding position.

To dismount, the vaulter, supported by the hands, must



extend the feet, make a little swing forward, and a greater one backward, so as to heave both feet behind over the bar, and spring to the ground with them close.

Going Over.

To do this, the vaulter must first clearly define to himself the place where he intends to fall.

Having placed both hands upon the bar, he must first bend and then extend the joints, so as to raise the body with all his strength, and throw his legs, kept close, high over the bar.—(Plate IV. Figure 1.) When the right hand (if he vault to the right) quits the bar, the left remains, the feet reach the ground on the opposite side, and he falls on both feet, with the knees projected, and the hands ready, if necessary, to break the fall.

In vaulting to the right, the left foot passes in the space which was between both hands, the right hand quits the bar, and the left guides the body in the descent. In vaulting to the left, the right foot passes in the space which was between both hands, the left hand quits the bar, and the right guides the body in its descent.

As, however, it is difficult for beginners to vault either way, this is not to be attempted until after sufficient practice in the way which may be easiest.

After some practice, the vaulter may, with a preparatory spring, try the following heights:

- 1st. That of the pit of the stomach;
- 2dly. That of a middling sized horse;
- 3dly. His own height, or more.

STRAIGHTFORWARD VAULTING.

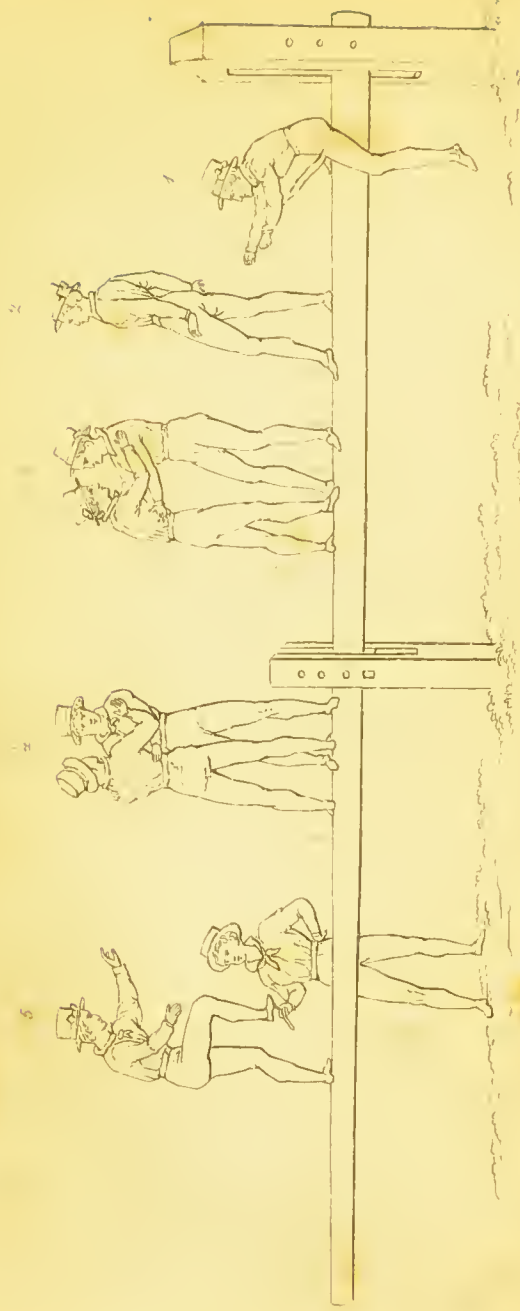
For this purpose, both hands must be placed at such distance on the bar as to give room for the feet between them; the body must be forcibly raised; the knees must be drawn up towards the breast; and the feet must come between the hands, without moving them from their place.—(Plate IV. Figure 2.)

This should be practised until it can be done easily.

This straightforward vault may have three different terminations.

When the feet are in the space between the hands, the vaulter may stand upright. He may pass his feet to the opposite side, whilst he seats himself. He may continue the leap over the seat, through the arms, letting both hands go at once after the legs have passed.





BALANCING.

BALANCING IN GENERAL.

Balancing is the art of preserving the stability of the body upon a narrow or a moving surface.

The balancing bar consists of a round and tapering pole, supported horizontally, about three feet from the ground, by upright posts, one at its thicker extremity, and another about the middle; between the parts of which it may be raised or lowered, by means of an iron peg passing through holes in their sides. The unsupported end of the bar wavers, of course, when stepped upon.—(Plate V.)

The upper surface of the bar, being smooth in dry weather, the soles of the shoes should be damped; the ground about the bar should consist of sand; and the exercises should be cautiously performed.

POSITION AND ACTION IN BALANCING.

In this exercise, the head should be held up, the body erect, the shoulders back, the arms extended, the hands shut, and the feet turned outwards.

At first, the balancer may be a few times conducted along the bar; but he must gradually receive less and less assistance, till at last the assistant only remains by his side.

The pole may be mounted either from the ground, or

from the riding position on the beam. In the latter case, the balancer may raise the right foot, place it flat on the beam, with the heel near the upper part of the thigh, and rise on the point of the foot, carrying the weight of the body before him.—(Plate V. Figure 1.)

In this case, the beam must not be touched with the hands; the left leg must hang perpendicularly, with the toe towards the ground; and the arms must be stretched forward.

After keeping the balance for some minutes in this position, he must stretch the left leg out before him, place his heel on the middle of the beam, with the toe well turned outward, and transfer the weight of the body from the point of the right foot to the left heel.—(Plate V. Figure 2.)

These steps he must perform alternately till he reaches the end of the beam.

URNS, ETC. IN BALANCING.

When the balancer is able to walk firmly and in good position along the bar, and to spring off whenever he may lose his balance, he may attempt to turn round, first at the broad, then at the narrow end, and to return.

He may next try to go backward.

In going backward, it is no longer the heel, but the tip of the toes, which receives the weight; the leg which hangs being stretched backward, with the hip, knee, and heel forming a right angle, till the toes, by a transverse motion, are so placed on the middle of the beam, that the

balancer can safely transfer to them the whole weight of the body.

To acquire the art of passing an obstacle placed laterally, two balancers may pass each other.

For this purpose, they hold one another fast by the arms, advance breast to breast, place each his right foot close forward to that of his comrade, across the bar, (Plate V. Figure 3,) and turn completely round each other, by each stepping with his left foot round the right one of the other, as at Figure 4.

To acquire the art of passing an obstacle placed inferiorly, a large stone may be laid upon the bar, or a stick may be held before the balancer, about the height of the knee.—(Plate V. Figure 5.)

To acquire the art of carrying any body, the balancer may at first walk along the bar with his hands folded across his breast, instead of using them to balance himself; and he may afterwards carry bodies of various magnitudes.

SKATING.

SKATING IN GENERAL.

Skating is the art of balancing the body, while, by the impulse of each foot alternately, it moves rapidly upon the ice.

CONSTRUCTION OF THE SKATE.

The wood of the skate should be slightly hollowed, so as to adapt it to the ball of the foot; and, as the heel of the boot must be thick enough to admit the peg, it may be well to lower the wood of the skate corresponding to the heel, so as to permit the foot to regain that degree of horizontal position which it would otherwise lose by the height of the heel; for, the more of the foot that is in contact with the skate, the more firmly will these be attached.

As the tread of the skate should correspond as nearly as possible with that of the foot, the wood of the skate should be of the same length as the boot or shoe.

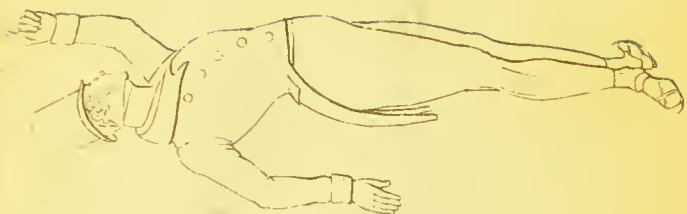
The irons should be of good steel, well secured in the wood.

The irons should pass beyond the screw at the heel nearly as far as the wood itself; but the bows of the iron should not project much beyond the wood.

If the skate project much beyond the wood, the whole foot, and more especially its hind part, must be raised considerably from the ice when the front or bow of the skate is brought to bear upon it; and, as the skater

Plate 15





depends upon this part for the power of his stroke, it is evident that that must be greatly diminished by the general distance of the foot from the ice.

In short, if the skate be too long, the stroke will be feeble, and the back of the leg painfully cramped: if it be too short, the footing will be proportionally unsteady and tottering.

As the position of the person in the act of skating is never vertical, and is sometimes very much inclined, and as considerable exertion of the muscles of the leg is requisite to keep the ankle stiff, this ought to be relieved by the lowness of the skates.

Seeing, then, that the closer the foot is to the ice the less is the strain on the ankle, it is clear that the foot ought to be brought as near to the ice as is possible, without danger of bringing the sole of the shoe in contact with it, while traversing on the edge of the skate. The best height is about three quarters of an inch.

The iron should be about a quarter of an inch thick.

The grooved or fluted skate, if ever useful, is of use only for boys, or for very light persons, whose weight is not sufficient to catch the ice in a hard frost. They certainly should never be used by a person who is heavier than a boy of thirteen or fourteen years of age usually is, because the sharp edge too easily cuts into the ice, and prevents figuring.

Fluted skates, indeed, are even dangerous; for the snow or ice cuttings are apt to collect and consolidate in the grooves, till the skater is raised from the edge of his skate, and thrown.

In the general inclination of the foot in skating, no edge can have greater power than that of rectangular shape; the tendency of its action is downwards, cutting through rather than sliding on the surface; and greater hold than this is unnecessary.

The irons of skates must be kept well and sharply ground. This should be done across the stone, so as to give the bottom of the skate so slight a concavity, as to be imperceptible, which ensures an edge whose angle is not greater than right.

Care must be taken that one edge is not higher than the other; so that, when the skate is placed upon an even surface, it may stand quite perpendicularly.

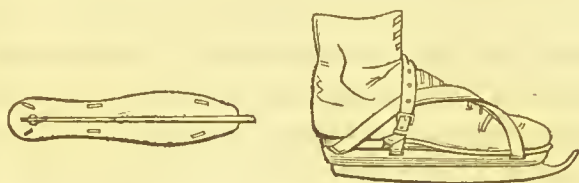
The wear of the iron not being great with a beginner, one grinding will generally last him through an ordinary winter's skating on clean ice.

The bottom of the iron should be a little curved; for, if perfectly straight, it would be capable of describing only a straight line, whereas the skater's progress must be circular, because, in order to bring the edge to bear, the body must be inclined, and inclination can be preserved only in circular motion.

This curve of the iron should be part of a circle whose radius is about two feet. That shape enables the skater to turn his toe or heel outwards or inwards with facility.

A screw would have a firmer hold than a mere peg in the hole of the boot; but, as it is less easily removed, skaters generally prefer the peg. The skater should be careful not to bore a larger hole in the heel than is sufficient to admit the peg.

The more simple the fastenings of the skate are, the better. The two straps, namely, the cross strap over the toe, and the heel strap, cannot be improved, unless perhaps by passing one strap through the three bores, and so making it serve for both.



Before going on the ice, the young skater must learn to tie on the skates, and may also learn to walk with them easily in a room, balancing alternately on each foot.

DRESS OF THE SKATER.

A skater's dress should be as close and unincumbered as possible. Large skirts get entangled with his own limbs, or those of the persons who pass near him; and all fulness of dress is exposed to the wind.

Loose trowsers, frocks, and more especially great coats, must be avoided; and, indeed, by wearing additional under-clothing, they can always be dispensed with.

As the exercise of skating produces perspiration, flannel next the chest, shoulders, and loins, is necessary, to avoid the evils produced by sudden chills in cold weather.

The best dress for this exercise is what is called a dress-coat buttoned, tight pantaloons, and laced boots (having the heel no higher than is necessary for the peg) which hold the foot tightly and steadily in its place, as well as

give the best support to the ankle; for it is of no use to draw the straps of the skate hard, if the boot or shoe be loose.

PRELIMINARY AND GENERAL DIRECTIONS.

Either very rough or very smooth ice should be avoided.

The person who for the first time ventures on the ice, must not trust to a stick. He may make a friend's hand his support, if he require one; but that should be soon relinquished, in order to balance himself. He will probably scramble about for half an hour or so, till he begins to find out where the edge of his skate is.

The following directions will be useful:

The beginner must be fearless, but not violent; not even in a hurry.

He must not let his feet get far apart, and must keep his heels still nearer together.

He must keep the ankle of the foot on the ice quite firm; not attempting to gain the edge of the skate by bending it, because the right mode of getting to either edge is by the inclination of the whole body in the direction required; and this inclination should be made fearlessly and decisively.

He must keep the leg which is on the ice perfectly straight; for, though the knee must be somewhat bent at the time of striking, it must be straightened as quickly as possible without any jerk.

The leg which is off the ice should also be kept straight, though not stiff, having an easy though slight play, the toe

pointing downwards, and the heel being kept within from six to twelve inches of the other.

He must not look down at the ice, nor at the feet, to see how they perform.

He may at first incline his body a little forward, for safety, but must hold his head up, and see where he goes.

He must keep his person erect, and his face rather elevated than otherwise, but not affectedly.

When once off, he must bring both feet up together, and strike again, as soon as he finds himself steady enough.

While skating, he must rarely allow both feet to be on the ice together.

The position of the arms should be easy and varied; one being always more raised than the other, this elevation being alternate, and the change corresponding with that of the legs: that is, the right arm being raised as the right leg is put down, and *vice versá*, so that the arm and leg of the same side may not be raised together.

The face must be always turned in the direction of the line intended to be described. Hence, in backward skating, the head will be inclined much over the shoulder; in forward skating, but slightly.

All sudden and violent action must be avoided.

Stopping may be caused by slightly bending the knees, drawing the feet together, inclining the body forward, and pressing on the heels. It may also be caused by turning short to the right or left, the foot on the side to which we turn being rather more advanced, and supporting part of the weight.

THE ORDINARY RUN, OR INSIDE EDGE FORWARD.

The first attempt of the beginner is to walk, and this walk shortly becomes a sliding gait.

This is done entirely on the inside edge of the skate.

The first impulse is to be gained by pressing the inside edge of one skate against the ice, and advancing with the opposite foot.

To effect this, the beginner must bring the feet nearly together, turn the left somewhat out, and place the right a little in advance, and at right angles with it; lean forward with the right shoulder, and at the same time move the right foot onwards, and press sharply, or strike the ice, with the inside edge of the left skate,—care being taken instantly to throw his weight on the right foot.—(Plate VI. Figure 1.)

While thus in motion, the skater must bring up the left foot nearly to a level with the other, and may for the present proceed a short way on both feet.

He must next place the left foot in advance in its turn, bring the left shoulder forward, inclining to that side, strike from the inside edge of the right skate, and proceed as before.

Finally, this motion has only to be repeated on each foot alternately, gradually keeping the foot from which he struck longer off the ice, till he has gained sufficient command of himself to keep it off altogether, and is able to strike directly from one to the other, without at any time having them both on the ice together.

Having practised this till he has gained some degree of firmness and power, and a command of his balance, he may proceed to

THE FORWARD ROLL, OR OUTSIDE EDGE.

This is commonly reckoned the first step to figure skating, as, when it is once effected, the rest follows with ease.

The impulse for the forward roll is gained in the same manner as for the ordinary run ; but, to get on the outside edge of the right foot, the moment that foot is in motion, the skater must advance the left shoulder, throw the right arm back, look over the right shoulder, and incline the whole person boldly and decisively to that side, keeping the left foot suspended behind, with its toe closely pointed to the heel of the right.—(Plate VI. Figure 2.)

As he proceeds, he must bring the left foot past the inside of the right, with a slight jerk, which produces an opposing balance of the body ; the right foot must quickly press, first on the outside of the heel, then on the inside of its toe ; the left foot must be placed down before it, before it is removed more than about eight or ten inches from the other foot ; and, by striking outside to the left, and giving at the same moment a strong push with the inside of the right toe, the skater passes from right to left, inclining to the left side, in the same manner as he did to the right.

The skater then continues to change from left to right, and from right to left in the same manner.

He must not at first remain long upon one leg, nor

scruple occasionally to put the other down to assist. And throughout he must keep himself erect, leaning most on the heel.

The Dutch travelling roll is done on the outside edge forward, in the manner just represented, except that there is described a small segment of a very large circle, thus :



diverging from the straight line no more than is requisite to keep the skate on its edge.

The cross roll or figure 8 is also done on the outside edge forward.

This is only the completion of the circle on the outside edge ; and it is performed by crossing the legs, and striking from the outside instead of the inside edge.

In order to do this, as the skater draws to the close of the stroke on his right leg, he must throw the left quite across it, which will cause him to press hard on the outside of the right skate, from which he must immediately strike, at the same time throwing back the left arm, and looking over the left shoulder, to bring him well upon the outside of that skate. By completing the circle in this manner on each leg, the 8 is formed :



each circle being small, complete and well-formed before the foot is changed.



The Mercury Figure is merely the outside and inside forward succeeding each other on the same leg alternately, by which a serpentine line is described thus :

Outside.

Inside.

Outside.



This is skated with the force and rapidity gained by a run. When the run is complete, and the skater on the outside edge, his person becomes quiescent, in the attitude of Mercury, having the right arm advanced and much raised, the face turned over the right shoulder, and the left foot off the ice, a short distance behind the other, turned out and pointed.

FIGURE OF THREE, OR INSIDE EDGE BACKWARD.

This figure is formed by turning from the outside edge forward to the inside edge backward on the same foot.

The head of the 3 is formed like the half circle, on the heel of the outside edge ; but when the half circle is complete, the skater leans suddenly forward, and rests on the same toe inside, and a backward motion, making the tail of the 3, is the consequence.

The figure described by the right leg should be nearly in the form of No. 1; and on the left leg should be reversed, and resemble No. 2.



At first, the skater should not throw himself quite so hard as hitherto on the outside forward, in order that he may be able the more easily to change to the inside back. He may also be for some time contented with much less than a semicircle before he turns.

Having done this, and brought the left leg nearly up to the other, the skater must not pass it on in advance, as he would to complete a circle, but must throw it gently off sidewise, at the same moment turning the face from the right to the left shoulder, and giving the whole person a slight inclination to the left side. These actions throw the skater upon the inside of his skate; but as the first impulse should still retain most of its force, he continues to move on the inside back, in a direction so little different, that his first impulse loses little by the change.—(Plate VII. Figure 1.)

If unable to change the edge by this method, the skater may assist himself by slightly and gently swinging the arm and leg outward, so as to incline the person to a rotatory motion. This swing, however, must be corrected as soon as the object is attained; and it must generally be observed that the change from edge to edge is to be effected merely by the inclination of the body, not by swinging.

When the skater is able to join the ends of the 3, so as to form one side of a circle, then by striking off in the same manner, and completing another 3, with the left leg, the combination of the two 3's will form an 8.

In the first attempts, the 3 should not be made above two feet long, which the skater will acquire the power of doing almost imperceptibly. He may then gradually extend the size as he advances in the art.

Though, in this section, backward skating is spoken of, the term refers to the skate only, which in such case moves heel foremost, but the person of the skater moves sidewise, the face being always turned in the direction in which he is proceeding.

OUTSIDE EDGE BACKWARDS.

Here the skater, having completed the 3, and being carried on by the first impulse, still continues his progress in the same direction, but on the other foot, putting it down on its outside edge, and continuing to go backwards slowly. Thus is formed the following figure :



To accomplish this, the skater, after making the 3, and placing the outside edge of his left foot on the ice, should at once turn his face over the right shoulder, raise his right foot from the ice, and throw back his right arm and shoulder.—(Plate VII. Figure 2.)

If, for a while, the skater is unable readily to raise that foot which has made the 3, and leave himself on the outside of the other skate, he may keep both down for some distance, putting himself, however, in attitude of being on the outside only of one skate, and gradually lifting the other off the ice as he acquires ability.

When finishing any figure, this use of both feet backward has great convenience and beauty.

Before venturing on the outside backward, the skater ought to take care that the ice is clear of stones, reeds, &c. and must also be certain of the good quality of his irons.

When going with great force backward, the course may be deflected so as to stop by degrees; and, when moving slowly, the suspended foot may be put down in a cross direction to the path.

Such, then, are the four movements of which alone the skate is capable: namely, the inside edge forward; the outside forward; the inside back; and the outside back; in which has been seen how the impulse for the first two is gained, and how the third flows from the second, and the fourth from the third. By the combination of these elements of skating, and the variations with which they succeed each other, are formed all the evolutions in this art.

The Double Three is that combination in which the skates are brought from the inside back of the first three to the outside forward of the second.

Here the skater, after having completed one 3, and

being on the inside back, must bring the whole of the left side forward, particularly the leg, till it is thrown almost across the right, on which he is skating. This action brings him once more to the outside forward, from which he again turns to the inside back. While he is still in motion on the second inside back of the right leg, he must strike on the left, and repeat the same on that.

It is at first enough to do two 3's perfectly and smoothly. Their number from one impulse may be increased as the skater gains steadiness and skill; the art of accomplishing this being to touch as lightly as possible on each side of the skate successively, so that the first impulse may be preserved and made the most of.

The Back Roll is a means of moving from one foot to another.

Suppose the skater to have put himself on the outside edge back of the left leg, with considerable impulse, by means of the 3 performed on the right,—not bearing hard on the edge, for the object is to change it, and take up the motion on the right foot,—this is effected by throwing the left arm and shoulder back, and turning the face to look over them; when, having brought the inside of his left skate to bear on the ice, he must immediately strike from it to the outside back of the other, by pressing it into the ice as forcibly as he can at the toe. Having thus been brought to the backward roll on the right foot, he repeats the same with it.

The Back Cross Roll is done by changing the balance of

the body, to move from one foot to the other, in the same manner as for the back roll.

Here the stroke is from the outside instead of the inside edge of the skate; the edge on which he is skating not being changed, but the right foot, which is off the ice, being crossed at the back of the left, and put down, and the stroke taken at the same moment, from the outside edge of the left skate at the toe.

As in the back roll of both forms, the strokes are but feeble, the skater may, from time to time, renew his impulse as he finds occasion, by commencing anew with the 3.

The large outside backward roll is attained by a run, when the skater, having gained all the impulse he can, strikes on the outside forward of the right leg, turns the 3, and immediately puts down the left on the outside back. He then, without further effort, flies rapidly over the ice; the left arm being raised, the head turned over the right shoulder, and the right foot turned out and pointed.

It must now be evident, that the elements described may be combined and varied infinitely. Hence waltz and quadrille skating, &c. which may be described as combinations of 3's, outside backwards, &c. These are left to the judgment of the skater, and his skill in the art.

As to feats in skating, we are told, that the Frieslander, who is generally a skilful skater, often goes for a long time at the rate of fifteen miles an hour. In 1808, two young women, going thirty miles in two hours, won the prize in

a skating race at Groningen. In 1821, a Lincolnshire man, for a wager of 100 guineas, skated one mile within two seconds of three minutes.

METHOD OF TREATMENT

RECOMMENDED BY THE HUMANE SOCIETY IN THE CASE OF
DROWNED PERSONS.

CAUTIONS.

1. Lose no time. 2. Avoid all rough usage. 3. Never hold the body up by the feet. 4. Nor roll the body on casks. 5. Nor rub the body with salt or spirits. 6. Nor inject tobacco-smoke or infusion of tobacco.

RESTORATIVE MEANS, IF APPARENTLY DROWNED.

Send quickly for medical assistance ; but do not delay the following means.

i. Convey the body carefully, with the head and shoulders supported in a raised position, to the nearest house.

ii. Strip the body, and rub it dry ; then wrap it in hot blankets, and place it in a warm bed in a warm chamber.

iii. Wipe and cleanse the mouth and nostrils.

iv. In order to restore the natural warmth of the body :

1. Move a heated covered warming-pan over the back and spine.

2. Put bladders or bottles of hot water, or heated bricks, to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet.

3. Foment the body with hot flannels ; but, if possible,
4. Immerse the body in a warm bath, as hot as the hand can bear without pain, as this is preferable to the other means for restoring warmth.

5. Rub the body briskly with the hand : do not, however, suspend the use of the other means at the same time.

v. In order to restore breathing, introduce the pipe of a common bellows (where the apparatus of the society is not at hand) into one nostril, carefully closing the other and the mouth : at the same time draw downwards, and push gently backwards the upper part of the windpipe, to allow a more free admission of air : blow the bellows gently in order to inflate the lungs, till the breast be a little raised : the mouth and nostrils should then be set free ; and a moderate pressure should be made with the hand upon the chest. Repeat this process till life appears.

vi. Electricity should be employed early by a medical assistant.

vii. Inject into the stomach, by means of an elastic tube and syringe, half a pint of warm brandy and water, or wine and water.

viii. Apply sal volatile or hartshorn to the nostrils.

IF APPARENTLY DEAD FROM INTENSE COLD.

Rub the body with snow, ice, or cold water. Restore warmth by slow degrees ; and after some time, if necessary, employ the means recommended for the drowned. In these accidents, it is highly dangerous to apply heat too early.



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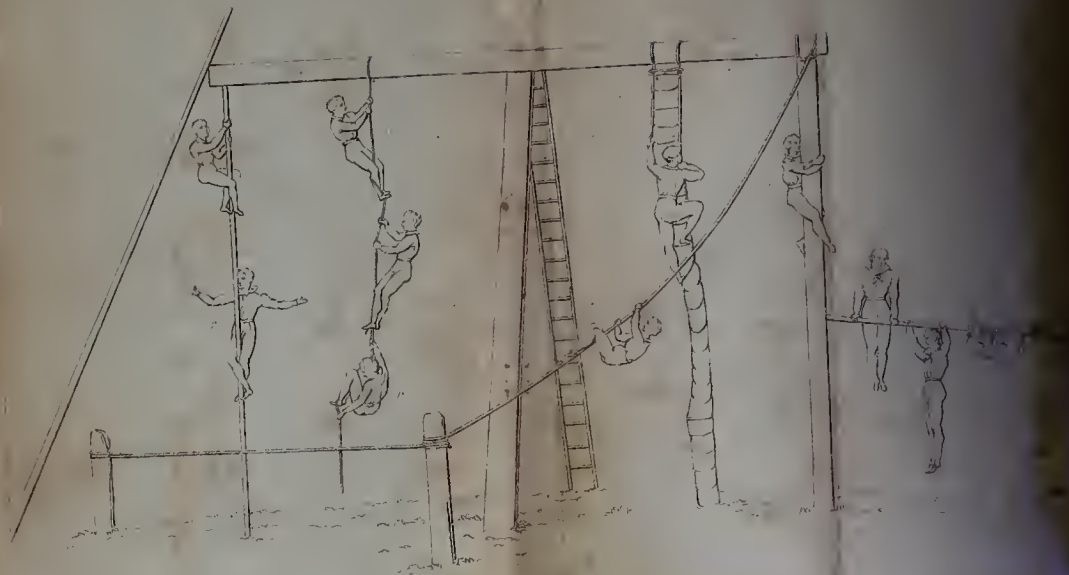
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IF APPARENTLY DEAD FROM INTENSE COLD.

Rub the body with snow, ice, or cold water. Restore warmth by slow degrees; and after some time, if necessary, employ the means recommended for the drowned. In these accidents, it is highly dangerous to apply heat too early.





climbing

CLIMBING.

CLIMBING IN GENERAL.

Climbing is the art of transporting the body in any direction, by the aid, in general, both of the hands and feet.

The climbing-stand consists of two strong poles, about fifteen feet high, and from fifteen to twenty-five feet distant, which are firmly fixed in the ground, and support a beam strongly fastened to them. One pole is $2\frac{1}{2}$ inches in diameter; the other, which serves as a mast, should be considerably thicker; and both serve the purpose of climbing. To the beam are attached other implements of climbing: viz. a ladder, an inclined board, a mast, an inclined pole, a horizontal bar, a rope-ladder, an upright, an inclined, and a level rope.—(Plate VIII.)

KINDS OF CLIMBING.

Climbing on fixed bodies should first be practised.

The Ladder.

Exercises on the ladder may be practised in the following ways:

- 1st. By ascending and descending as usual.
- 2d. With one hand, carrying something in the other.
- 3d. Without using the hands.
- 4th. Passing another on the front of the ladder, or swinging to the back, to let another pass.

The Inclined Board.

This should be rather rough, about two feet broad, and two inches thick.

To climb this, it is necessary to seize both sides with the hands, and to place the feet flat in the middle.

The inclination of the board should be diminished with the progress of the pupil.

At first, it may form with the ground an angle of about thirty degrees; and the climber should not go more than half way up.

This angle may gradually be augmented to a right angle, or the direction of the board may be made perpendicular.

When the board is thus little or not at all inclined, the body must be much curved inward, and the legs thrust up, so that the higher one is nearly even with the hand.

In descending, small and quick steps are necessary.

The Upright Pole.

The upright pole should be about two inches and a half in diameter, perfectly smooth, and free from splinters.

The position of the climber is shewn in Plate VIII. Figure 1. where nothing touches the pole except the feet, legs, knees, and hands.

The climber grasps as high as possible with both hands, raises himself by bending the body and drawing his legs up the pole, holds fast by them, extends the body, again grasps higher up with his hands, and continues the same use of the legs and arms.

The descent is performed by sliding down with the legs, and scarcely touching with the hands, as in Plate VIII. Figure 2.

The Mast.

This is more difficult, as it cannot be grasped with the hands; and it consequently should not be practised until the climber is expert in the previous exercises.

Here the position of the legs are the same as for the pole; but, instead of grasping the mast, the climber lays hold of his left arm with his right hand, or the reverse, and clings to the mast with the whole body, as in Plate VIII. Figure 3.

The Slant Pole.

This must be at least three inches thick.

As, in this exercise, the hands bear more of the weight than in climbing the upright pole, it should not be attempted until expertness in the other is acquired.

The Horizontal, or Slightly Inclined Bar.

This may be about two inches wide at top, from ten to fifteen feet long, and supported by two posts, respectively six and seven feet high.

The climber must grasp with both hands as high a part of the bar as he can reach, and, with arms extended, support his own weight as long as possible.

He must next endeavour to bend the elbows so much that one shoulder remains close under the bar, as seen in Plate VIII. Figure 4. Or he may place both hands on the same side, and draw himself up so far as to see over it, keeping the legs and feet close and extended.

He may then hang with his hands fixed on both sides, near to each other, having the elbows much bent, the upper parts of the arms close to the body, and one shoulder close under the bar, may lower the head backwards, and may, at the same time, raise the feet to touch each other over the bar.—(Plate VIII. Figure 5.)

In the last position, he may move the hands one before the other, forward or backward, and may either slide the feet along the bar, or alternately change them like the hands, and retain a similar hold.

Hanging also by the hands alone, as in Plate VIII. Figure 6, he moves them either forward or backward, keeping the arms firm, and the feet close and extended. Or he may place himself in front of the bar, hanging by both hands, and move laterally.

Being likewise in front of the bar, with his hands resting upon it, as in Plate VIII. Figure 7, he may move along the bar either to the right or left.

Being in the position of Plate VIII. Figure 5, the climber may endeavour to sit upon the bar, for instance, on the right side, by taking hold with the right knee-joint, grasping firmly with the right hand, and bringing the left arm-pit over the bar. The riding position is thus easily obtained.

From the riding position, he may, by supporting himself with one thigh, turn towards the front of the bar, allowing the leg of the other side to hang down; and he may then very easily move along the bar sidewise, by raising his body with his hands placed laterally on the bar.

The Rope Ladder.

This should have several rundles to spread it out, and ought in all respects to be so constructed as not to twist and entangle.

The only difficulty here is that as it hangs perpendicularly, and is flexible, its steps are liable to be pushed forward, and in that case the body is thrown into an oblique position, and the whole weight falls on the hands.

To prevent this, the climber must keep the body stretched out and upright.—(Plate VIII. Figure 8.)

The Upright Rope.

In this exercise, the securing the rope may be effected in various ways.

In the first method, shewn in Plate VIII. Figure 9, the hands and feet alone are employed. The feet are crossed; the rope passes between them, and is held fast by their pressure; the hands then grasp higher; the feet are drawn up; the feet are again applied to the rope; and the same process is repeated.

In the second, which is the sailor's method, shewn at Plate VIII. Figure 10, the rope passes from the hands, generally along the right thigh, just above the knee; winds round the inside of the thigh, under the knee-joint, over the outside of the leg, and across the instep, whence it hangs loose; and the climber, by treading with the left foot upon that part of the rope where it crosses the right one, is firmly supported. This mode of climbing requires

the right leg and foot to be so managed that the rope keeps its proper winding whenever it is quitted by the left foot.

In descending, to prevent injury, the hands must be lowered alternately.

To rest upon the upright rope, shewn in Plate VIII. Figure 11, the climber must swing the right foot round the rope, so as to wind it three or four times round the leg; must turn it, by means of the left foot. once or twice round the right one, of which the toes are to be bent upwards; and must tread firmly with the left foot upon the last winding. Or, to obtain a more perfect rest, he may lower his hands along the rope, as in Figure 11, hold with the right hand, stoop, grasp with the left the part of the rope below the feet, raise it and himself again, and wind it round his shoulders, &c. until he is firmly supported.

The Oblique Rope.

The climber must fix himself to the rope, as in Plate VIII. Figure 12, and advance the hands along it, as already directed. The feet may move along the rope alternately; or one leg, hanging over the rope, may slide along it; or, which is best, the sole of one foot may be laid upon the rope, and the other leg across its instep, so that the friction is not felt.

The Level Rope.

This may have its ends fastened to posts of equal heights; and the same exercises may be performed upon it.

Climbing Trees.

In attempting this exercise, the kind of the wood and strength of the branches must be considered.

Summer is the best time for practising it, as withered branches are then most observable; and even then it is best to climb low trees, until some experience is acquired.

As the surface of branches is smooth, or moist and slippery, the hands must never for a moment be relaxed.

In this exercise, the agility of the climber wonderfully increases. He is soon able to save the trouble of climbing the trunk, by seizing a strong branch hanging low enough to be reached by a run and a leap, and swing himself up, and even to pass from the branches of one tree to those of a contiguous tree, and so on to many of them.

SWIMMING.

PREPARATORY INSTRUCTIONS AS TO ATTITUDE AND ACTION
IN SWIMMING.

As it is on the movements of the limbs, and a certain attitude of the body, that the power of swimming depends, its first principles may evidently be acquired out of the water.

Attitude.

The head must be drawn back, and the chin elevated; the breast must be projected, and the back must be hollowed and kept steady.—(Plate IX. Figures 1 and 2.)

The head can scarcely be thrown too much back, or the back too much hollowed. Those who do otherwise, swim with their feet near the surface of the water, instead of having them two or three feet deep.

Action of the Hands.

In the proper position of the hands, the fingers must be kept close, with the thumbs by the edge of the fore fingers; and the hands must be made concave on the inside, though not so much as to diminish their size and power in swimming.

The hands, thus formed, should be placed just before the breast, the wrist touching it, and the fingers pointing forward.—(Plate X. Figure 1.)











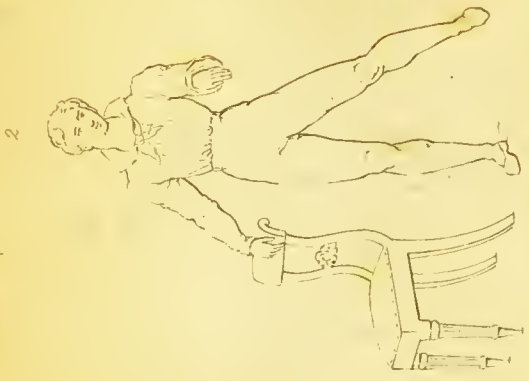






Swimming — Action of the Feet

Swimming — Actor of the Fort



The first elevation is formed by raising the ends of the fingers three or four inches higher than the rest of the hands.

The second elevation is formed by raising the outer edge of the hand two or three inches higher than the inner edge.

The formation of the hands, their first position, and their two modes of elevation, being clearly understood, the forward stroke with the hands is next made, by projecting them in that direction to their utmost extent, employing therein their first elevation, in order to produce buoyancy, but taking care the fingers do not break the surface of the water.—(Plate X. Figure 2.)

In the outward stroke of the hands, the second elevation must be employed, and, in it, they must sweep downward and outward as low as, but at a distance from, the hips, both laterally and anteriorly.—(Plate XI. Figures 1 and 2.)

The retraction of the hands, is effected by bringing the arms closer to the sides, bending the elbow-joints upwards and the wrists downwards, so that the hands hang down, while the arms are raising them to the first position.

The action of the hands should be gentle and easy.

In the three movements just described, one arm may be exercised at a time, until each is accustomed to the action.

Action of the Feet.

In drawing up the legs, the knees must be inclined inward, and the soles of the feet outward.—(Plate XII. Figure 1.)

The throwing out the feet must be to the extent of the

legs, as widely from each other as possible.—(Plate XII. Figure 2.)

The bringing down the legs must be done briskly, until they come close together.

In drawing up the legs, there is a loss of power; in throwing out the legs, there is a gain equal to that loss; and in bringing down the legs, there is an evident gain.

The arms and legs should act alternately; the arms descending while the legs are rising (Plate XIII. Figure 1;) and, oppositely, the arms rising while the legs are descending.—(Plate XIII. Figure 2.)

Thus the action of both is unceasingly interchanged; and, until great facility in this interchange is effected, no one can swim smoothly, or keep the body in one continued progressive motion.

In practising the action of the legs, one hand may rest on the top of a chair, while the opposite leg is exercised.

When both the arms and the legs are separately accustomed to the action, the arm and leg of the same side may be exercised together.

PLACE, TIME, ETC. OF SWIMMING.

Place.

Of all places for swimming, the sea is the best; running waters, next; and ponds, the worst.

In these, a particular spot should be chosen, where there is not much stream, and which is known to be safe.

The swimmer should make sure that the bottom is not

out of his depth; and, on this subject, he cannot be too cautious when he has no one with him who knows the place.

If he is capable of diving, he should ascertain if the water be sufficiently deep for that purpose, otherwise he may injure himself against the bottom.

The bottom should be of gravel, or smooth stones, and free from holes, so that he may be in no danger of sinking in the mud, or of wounding the feet.

Of weeds he must beware; for, if his feet get entangled among them, no aid, even if near, may be able to extricate him.

Time.

The best time of the year for swimming is in the months of May, June, July, and August.

As to particular times, that of rain is bad, for it chills the water, and, by wetting the clothes, endangers catching cold.

It is improper also immediately after a meal.

It is not less so when very hot, or quite cold.—After violent exercise, it is better to wash and employ friction than to bathe.

Dress.

Every swimmer should use short drawers, and might, in particular places, use canvass slippers.

It is even of great importance to be able to swim in jacket and trowsers.

Aids.

The aid of the hand is much preferable to corks or bladders, because it can be withdrawn gradually and insensibly.

With this view, a grown up person may take the learner in his arms; carry him into the water breast high; place him nearly flat upon it; support him by one hand under the breast; and direct him as to attitude and action.

If the support of the hand be very gradually withdrawn, the swimmer will, in the course of the first ten days, find it quite unnecessary.

When the aid of the hand cannot be obtained, inflated membranes or corks may be employed.

The only argument for their use is, that attitude and action may be perfected, while the body is thus supported, and that, with some contrivance, they also may gradually be laid aside, though by no means so easily as the hand.

The best mode of employing corks, is to choose a piece about a foot long and six or seven inches broad; to fasten a band across the middle of it; to place it on the back, so that the upper end may come between the shoulder-blades, where the edge may be rounded; and to tie the band over the breast. Over this, several other pieces of cork, each smaller than the preceding, may be fixed, so that, as the swimmer improves, he may leave them off one by one.

Even with all these aids, the young swimmer should never venture out of his depth, if he cannot swim without them.

Cramp.

As to cramp, those chiefly are liable to it who plunge into the water when they are heated, who remain in it till they are benumbed with cold, or who exhaust themselves by violent exercise.

Even when this does occur, the skilful swimmer knows how to reach the shore by the aid of the limbs which are unaffected, while the uninstructed one is liable to be drowned.

If attached in this way, the swimmer must strike out the limb with all his strength, thrusting the heel downward and drawing the toes upward, notwithstanding the momentary pain it may occasion. Or, he may immediately turn flat on his back, and jerk out the affected limb in the air, taking care not to elevate it so high as greatly to disturb the balance of the body.

If this do not succeed, he must paddle ashore with his hands, or keep himself afloat with their aid, until assistance reach him.

Should he even be unable to float on his back, he must put himself in the upright position, and keep his head above the surface by merely striking the water downward with his hands at the hips, without any assistance from the legs.

PROCEDURE WHEN IN THE WATER, AND USUAL MODE
OF FRONT SWIMMING.

Entering the Water.

Instructors should never force young swimmers reluctantly to leap into the water.

In entering, the head should be wetted first, either by plunging in head foremost, or by pouring water on it.

The swimmer should next advance, by a clear shelving shore or bank, where he has ascertained the depth by plumbing or otherwise, till the water reaches his breast; should turn towards the place of entrance; and, having inflated his breast, should lay it upon the water, suffering that to rise to his chin, the lips being closed.

Buoyancy in the Water.

The head alone is specifically heavier than salt water. Even the legs and arms are specifically lighter; and the trunk is still more so. Thus the body cannot sink in salt water, even if the lungs were filled, except owing to the excessive specific gravity of the head.

Not only the head, but the legs and arms, are specifically heavier than fresh water; but still the hollowness of the trunk renders the body altogether too light to sink wholly under water, so that some part remains above until the lungs become filled.

In general, when the human body is immersed, one eleventh of its weight remains above the surface in fresh water, and one tenth in salt water.



Swimming — Buoyancy in Water.



In salt water, therefore, a person throwing himself on his back, and extending his arms, may easily lay so as to keep his mouth and nostrils free for breathing; and, by a small motion of the hand, may prevent turning, if he perceive any tendency to it.

In fresh water, a man cannot long continue in that situation, except by the action of his hands on the water.

If no such action be employed, the legs and lower part of the body will gradually sink into an upright position, the hollow of the breast keeping the head uppermost.

If, however, in this position, the head be kept upright above the shoulders, as in standing on the ground, the immersion, owing to the weight of the part of the head out of the water, will reach above the mouth and nostrils; perhaps a little above the eyes.

If, on the contrary, in the same position, the head be leaned back, so that the face is turned upwards, the back part of the head has its weight supported by the water, and the face will rise an inch higher at every inspiration, and will sink as much at every expiration; but never so low that the water can come over the mouth.

For all these reasons, though the impetus given by the fall of the body into water occasions its sinking to a depth proportioned to the force of the impetus, its natural buoyancy soon impels it again to the surface, where, after a few oscillations up and down, it settles with the head free.

Unfortunately, ignorant people stretch the arms out to grasp at anything or nothing, and thereby keep the head

under; for the arms and head, together exceeding in weight one tenth of the body, cannot remain above the surface at the same time.

The buoyancy of the trunk, then and then only, occasions the head and shoulders to sink, the ridge of the bent back becoming the portion exposed; and in this attitude water is swallowed, by which the specific gravity is increased, and the body settles to the bottom.

It is, then, most important to the safety of the inexperienced to be firmly convinced that the body naturally floats.

To satisfy the beginner of the truth of this, Dr. Franklin advises him to choose a place where clear water deepens gradually, to walk into it till it is up to his breast, to turn his face to the shore, and to throw an egg into the water between him and it,—so deep that he cannot reach to take it up but by diving. To encourage him to take it up, he must reflect that his progress will be from deep to shallow water, and that at any time he may, by bringing his legs under him, and standing on the bottom, raise his head far above the water. He must then plunge under it, having his eyes open before as well as after going under; throw himself toward the egg; and endeavour, by the action of his hands and feet against the water, to get forward till within reach of it. In this attempt, he will find that the water buoys him up against his inclination; that it is not so easy to sink as he imagines; and that he cannot, but by force, get down to the egg. Thus he feels the power of water to support him, and learns to confide in that power; while his endeavours to overcome it, and

reach the egg, teach him the manner of acting on the water with his feet and hands, as he afterwards must in swimming, in order to support his head higher above the water, or to go forward through it.

If then any person, however unacquainted with swimming, will hold himself perfectly still and upright, as if standing, with his head somewhat thrown back so as to rest on the surface, his face will remain above the water, and he will enjoy full freedom of breathing.

To do this most effectually, the head must be so far thrown back that the chin is higher than the forehead; the breast must be inflated; the back must be made quite hollow; and the hands and arms must be kept under water.

If these directions be carefully observed, the face will float above the water, and the body will settle in a diagonal direction.—(Plate XIV. Figure 1.)

In this case, the only difficulty is to preserve the balance of the body. This is secured, as described by Bernardi, by extending the arms laterally under the surface of the water, with the legs separated, the one to the front and the other behind; thus presenting resistance to any tendency of the body to incline to either side, forward, or backward. This posture may be preserved any length of time.—(Plate XIV. Figure 2.)

Attitude and Action in the Water.

The swimmer having, by all the preceding means, acquired confidence, may now practise the instructions already given on attitude and action in swimming: or he

may first proceed with the system of Bernardi, which immediately follows.

As the former have already been given in ample detail, there is nothing new here to be added respecting them, except that, while the attitude is correct, the limbs must be exercised calmly, and free from all hurry and trepidation, the breath being held, and the breast kept inflated, while a few strokes are made.

Respiration in Swimming.

If the breath is drawn at the moment when the swimmer strikes out with the legs, instead of when the body is elevated by the hands descending towards the hips, the head partially sinks, the face is driven against the water, and the mouth becomes filled.

If, on the contrary, the breath is drawn when the body is elevated by the hands descending towards the hips, when the progress of the body forward consequently ceases, when the face is no longer driven against the water, but is elevated above the surface,—then not only cannot the water enter, but if the mouth were at other times even with, or partly under the surface, no water could enter it, as the air, at such times, driven outward between the lips, would effectually prevent it.

The breath should accordingly be expired while the body, at the next stroke, is sent forward by the action of the legs.

Coming out of the Water.

The swimmer should not remain in the water too long, but come out as soon as he feels himself tired, chilly, or numbed.

Subsequent friction drives the blood over every part of the body, creates an agreeable glow, and strengthens the joints and muscles.

UPRIGHT SWIMMING.

Bernardi's System.

The principal reasons given by Bernardi for recommending the upright position in swimming are—its conformity to the accustomed movement of the limbs ; the freedom it gives to the hands and arms, by which any impediment may be removed, or any offered aid readily laid hold of ; vision all around ; a much greater facility of breathing ; and lastly, that much less of the body is exposed to the risk of being laid hold of by persons struggling in the water.

The less we alter our method of advancing in the water from what is habitual to us on shore, the more easy do we find a continued exercise of it.

The most important consequence of this is, that though a person swimming in an upright posture advances more slowly, he is able to continue his course much longer ; and certainly nothing can be more beneficial to a swimmer than whatever tends to husband his strength, and to enable him to remain long in the water with safety.

Bernardi's primary object is to enable the pupil to float

in an upright posture, and to feel confidence in the buoyancy of his body.

He accordingly supports the pupil under the shoulders until he floats tranquilly with the head and part of the neck above the surface, the arms being stretched out horizontally under water. From time to time, the supporting arm is removed, but again restored, so as never to suffer the head to sink, which would disturb the growing confidence, and give rise to efforts destructive of the success of the lesson.

In this early stage, the unsteadiness of the body is the chief difficulty to be overcome.

The head is the great regulator of our movements in water. Its smallest inclination to either side instantly operates on the whole body ; and, if not corrected, throws it into a horizontal posture. The pupil must therefore restore any disturbance of equilibrium by a cautious movement of the head alone in an opposite direction.

This first lesson being familiarized by practice, he is taught the use of the legs and arms for balancing the body in the water.

One leg being stretched forward, the other backward, and the arms laterally, he soon finds himself steadily sustained, and independent of further aid in floating.

When these first steps have been gained, the sweeping semicircular motion of the arms is shown.

This is practised slowly, without motion forwards, until attained with precision.

After this, a slight inclination of the body from the upright position occasions its advancing.

The motion of striking with the legs is added in the same measured manner; so that the pupil is not perplexed by the acquisition of more than one thing at a time.

In this method, the motions of both arms and legs differ from those we have so carefully described, only in so far as they are modified by a more upright position. It is optional, therefore, with the reader to practise either method. The general principles of both are now before him.

The upright position a little inclined backward (which, like every other change of posture, must be done deliberately, by the corresponding movement of the head), reversing in this case the motion of the arms, and striking the flat part of the foot down and a little forward, gives the motion backward, which is performed with greater ease than when the body is laid horizontally on the back.

According to this system, Bernardi says, a swimmer ought at every stroke to urge himself forward a distance equal to the length of his body. A good swimmer ought to make about three miles an hour. A good day's journey may thus be achieved, if the strength be used with due discretion, and the swimmer be familiar with the various means by which it may be recruited.

Of Bernardi's successful practice, he says: "I having been appointed to instruct the youths of the Royal Naval Academy of Naples in the art of swimming, a trial of the proficiency of the pupils took place, under the inspection of a number of people assembled on the shore for that purpose, on the tenth day of their instruction. A twelve-oared boat attended the progress of the pupils, from motives of precaution. They swam so far out in the bay,

that at length the heads of the young men could with difficulty be discerned with the naked eye; and the Major General of Marine, Forteguerra, for whose inspection the exhibition was intended, expressed serious apprehensions for their safety. Upon their return to the shore, the young men, however, assured him, that they felt so little exhausted as to be willing immediately to repeat the exertion."

An official report on the subject has also been drawn up by a commission (appointed by the Neapolitan government), after devoting a month to the investigation of Bernardi's plan; and it states as follows:

"1st. It has been established by the experience of more than a hundred persons of different bodily constitutions, that the human body is lighter than water, and consequently will float by nature; but that the art of swimming must be acquired to render that privilege useful.

"2dly. That Bernardi's system is new, in so far as it is founded on the principle of husbanding the strength, and rendering the power of recruiting it easy. The speed, according to the new method, is no doubt diminished; but security is much more important than speed; and the new plan is not exclusive of the old, when occasions require great effort.

"3dly. That the new method is sooner learnt than the old, to the extent of advancing a pupil in one day as far as a month's instruction on the old plan."



Fig 12



Swimming — Trained Water

Treading Water.

This differs little from the system just described.

As in it, the position is upright; but progression is obtained by the action of the legs alone.

There is little power in this method of swimming; but it may be very useful in rescuing drowning persons, &c.

The arms should be folded across, below the breast, or compressed against the hips.

The legs must be employed as in front swimming, except as to time and extent.

They should perform their action in half the usual time, or two strokes should be taken in the time of one; because, acting perpendicularly, each stroke would otherwise raise the swimmer too much, and he would sink too low between the strokes, were they not quickly to follow each other.

They should also perform their action in about two thirds of the usual space, preserving the upper or stronger, and omitting the lower or weaker, part of the stroke.

There is, however, another mode of treading water, in which the thighs are separated, and the legs slightly bent, or together curved, as in a half-sitting posture. Here the legs are used alternately, so that, while one remains more contracted, the other, less so, describes a circle.

By this method, the swimmer does not seem to hop in the water, but remains nearly at the same height.

Plate XV. represents both these methods, and shews their peculiar adaptation to relieve drowning persons, &c.

BACK SWIMMING.

This, though little calculated for progression, is the easiest of all methods, because much of the head being immersed, little effort is required for support.

For this purpose, the swimmer must lie down gently upon the water; the body must be extended; the head must be kept in a line with it, so that the back and much of the upper part of the head may be immersed; the head and breast must remain perfectly unagitated by the action of the legs; the hand must be laid on the thighs (Plate XVI. Figure 1), and the legs must be employed as in front swimming, care being taken that the knees do not rise out of the water (Plate XVI. Figure 2.)

The arms may, however, be used in various ways in swimming on the back.

In the method called winging, the arms must be extended till in a line with each other; they must next be struck down to the thighs, with the palms turned in that direction, and the thumbs inclining downward to increase the buoyancy (Plate XVII. Figure 1); the palms must then be moved edgewise, and the arms elevated as before, (Plate XVII. Figure 2); and so on, repeating the same actions. The legs must throughout make one stroke as the arms are struck down, and another as they are elevated.

The other mode, called finning, differs from this only in the stroke of the arms being shorter, and made in the same time as that of the legs.

In back swimming, the body should be extended after



Swimming. — Back Swimming.



Spinning. — Four spinning.







each stroke, and long pauses should be made between these.

The passing from front to back, or back to front swimming, must always be immediately after throwing out the feet.

To turn from the breast to the back, the legs must be raised forward, and the head thrown backward, until the body is in a right position. To turn from the back to the breast, the legs must be dropped, and the body thrown forward on the breast.

FLOATING.

Floating is properly a transition from swimming on the back.

To effect it, it is necessary, while the legs are gently exercising, to extend the arms as far as possible beyond the head, equidistant from, and parallel with, its sides, but never rising above the surface; to immerse the head rather deeply, and elevate the chin more than the forehead; to inflate the chest while taking this position, and so to keep it as much as possible; and to cease the action of the legs, and put the feet together—(Plate XVIII. Figure 1.)

The swimmer will thus be able to float, rising a little with every inspiration, and falling with every expiration.

Should the feet descend, the loins may be hollowed.

SIDE SWIMMING.

For this purpose, the body may be turned either upon the right or left side: the feet must perform their usual motions: the arms alone require peculiar guidance.

In lowering the left, and elevating the right side, the swimmer must strike forward with the left hand, and side-wise with the right ; the back of the latter being in front instead of upward, and the thumb-side of the hand downward to serve as an oar.

In turning on the right side, the swimmer must strike out with the right hand, and use the left as an oar.

In both cases, the lower arm stretches itself out quickly, at the same time that the feet are striking ; and the upper arm strikes at the same time that the feet are impelling, the hand of the latter arm beginning its stroke on a level with the head. While this hand is again brought forward and the feet are contracted, the lower hand is drawn back towards the breast, rather to sustain than to impel.—(Plate XVIII. Figure 2.)

As side swimming presents to the water a smaller surface than front swimming, it is preferable when rapidity is necessary.

PLUNGING.

In the leap to plunge, the legs must be kept together, and the arms close.

The plunge may be made either with the feet or the head foremost.

With the feet foremost, they must be kept together, and the body inclined backwards.

With the head foremost, the methods vary.

In the deep plunge, which is used where we know there is depth of water, the swimmer has his arms outstretched, his knees bent, and his body leant forwards





Swimming. — Diving



(Plate XIX. Figure 1), till the head descends nearly to the feet, when the spine and knees are extended.

This plunge may be made without the slightest noise.

When the swimmer rises to the surface, he must not open his mouth before previously repelling the water.

In the flat plunge, which is used in shallow water, or where we do not know the depth, and which can be made only from a small height, the swimmer must fling himself forwards, in order to extend the line of the plunge as much as possible under the surface of the water; and as soon as he touches it, he must keep his head up, his back hollow, and his hands stretched forward, flat and inclined upward.

He will thus dart forwards a considerable way close under the surface, so that his head will reach it before the impulse ceases to operate.—(Plate XIX. Figure 2.)

DIVING.

The swimmer may prepare for diving by taking a slow and full inspiration, letting himself sink gently into the water, and expelling the breath by degrees, when the heart begins to beat strongly.

In order to descend in diving, the head must be bent forward upon the breast; the back must be made round; and the legs must be thrown out with greater vigour than usual; but the arms and hands, instead of being struck forward as in swimming, must move rather backward, or come out lower, and pass more behind.—(Plate XX. Figure 1.)

The eyes should, meanwhile, be kept open, as, if the

water be clear, it enables us to ascertain its depth, and see whatever lies at the bottom; and, when the diver has obtained a perpendicular position, he should extend his hands like feelers.

To move forward, the head must be raised, and the back straightened a little.

Still in swimming between top and bottom, the head must be kept a little downward, and the feet must be thrown out a little higher than when swimming on the surface (Plate XX. Figure 2); and, if the swimmer thinks that he approaches too near the surface, he must press the palms upwards.

To ascend, the chin must be held up, the back made concave, the hands struck out high, and brought briskly down. (Plate XX. Figure 3.)

THRUSTING.

This is a transition from front swimming, in which the attitude and motions of the feet are still the same, but those of the hands very different.

One arm, the right, for instance, is here lifted entirely out of the water, thrust forward as much as possible, and, when at the utmost stretch, let fall, with the hand hollowed, into the water, which it grasps or pulls toward the swimmer in its return transversely toward the opposite arm-pit.

While the right arm is thus stretched forth, the left, with the hand expanded, describes a small circle to sustain the body (Plate XXI. Figure 1); and, while the right arm pulls



Swimming. — Thrusting.

toward the swimmer, the left, in a widely described circle, is carried rapidly under the breast, towards the hip. (Plate XXI. Figure 2.)

When the left arm has completed these movements, it, in its turn, is lifted from the water, stretched forward, pulled back, &c.; and the right arm describes first the smaller, then the larger circle, &c.

The feet make their movements during the describing of the larger circle.

The thrust requires much practice; but, when well acquired, it not only relieves the swimmer, but makes great advance in the water, and is applicable to cases where rapidity is required for a short distance.

SPRINGING.

Some swimmers, at every stroke, raise not only their neck and shoulders, but breast and body, out of the water. This, when habitual, exhausts without any useful purpose.

As an occasional effort, however, this may be useful in seizing any object above; and it may then best be performed by the swimmer drawing his feet as close as possible under his body, stretching his hands forward, and, with both feet and hands, striking the water strongly, so as to throw himself out of the water as high as the hips.

ONE-ARM SWIMMING.

Here the swimmer must be more erect than usual, hold his head more backward, and use the legs and arm more quickly and powerfully. The arm, at its full extent, must be struck out rather across the body, and brought down before. The breast must be kept inflated.

This mode of swimming is best adapted for assisting persons who are drowning, and should be frequently practised, carrying first under, then over the water, a weight of a few pounds.

In assisting drowning persons, however, great care should be taken to avoid being caught hold of by them.

They should be approached from behind, and driven before, or drawn after the swimmer to the shore, by the intervention if possible of any body that may be at hand, and, if nothing be at hand, by means of the drowning person's hair, who should if possible be got on his back.

Should the drowning person attempt to seize the swimmer, he must let him loose immediately; and, if the drowning person has seized him, he must drop to the bottom, when the drowning man will endeavour to rise to the surface.

Two swimmers treading water may more easily assist a drowning person, by seizing him, one under each arm, and carrying him along with his head above water, and his body and limbs stretched out and motionless.

ROWING.

RIVER ROWING,* WITH TWO SCULLS.

THE BOAT, ETC.

It may be laid down as a general rule that, in calm weather, a *light and sharp boat* is preferable; and, in rough weather, a *heavier and broader one*.

The learner, however, should not at first begin in too light a boat, nor should he practise in rough weather, until he gets acquainted with its management.

TO LEAVE THE LANDING PLACE.

To leave the *shore*, the rower should, with the *boat-hook*, shove the boat off, head upon tide, or opposite to the current.

To leave *stairs*, the rower must either shove the boat off with the boat-hook, or place the *blade of the scull* forward, and perform what the London watermen call *be-laying* the boat's head out from the shore, accordingly as there is deep or shallow water.

This being done, the rower *sits down to his sculls*. These he puts in the *rullocks*, and turns the concave front or filling of the scull toward the stern of the boat.

* This should have the preference here, because the art is best learned on the smooth water, and in the lighter boats, of rivers.

THE SEAT.

The rower must *sit a-midships* on the thwart or seat of the boat, else it will heel to the side on which he is sitting, and much of his labour will be lost.

He should sit *with ease to himself*, having his feet on the middle of the stretcher, and his legs not quite extended; but his knees, as he rows, should be brought down, and his legs stretched.

THE PULL.

The rower should make *long strokes in a heavy boat, and shorter and quicker strokes in a light boat.*

At the BEGINNING OF THE PULL, he must, in general, bend his body till his head is over his knees, and extend his arms as far aft as convenient, that the blades of the sculls may be thrown correspondingly forward.—(Plate XXII.)

With regard to the back in particular, some think that, if a short distance is to be rowed, it should be bent; and that, if a long distance, it is less fatiguing to keep it straight.

When the arms are extended as far aft, and the blades of the sculls as far forward as convenient, which must never be so far as to jam in the rullocks, (Plate XXII.) the rower must dip the sculls into the water, and pull toward him, by at once bending the arms and the body.

When in the MIDDLE OF THE PULL, if the sculls are not short enough, or even if the head and body are slightly turned, one of the hands will go higher than the other; and, as the right is generally the stronger, it may go above, and the left below.



'Beginning of the Pull.'



Middle of the Pull.



End of the Pull.





Return of the Sculls.



This rule, however, must be modified by the circumstances of river-rowing. A waterman writes us as follows: "As to carrying one hand above the other, my way is, that if, for instance, I go from Greenwich to Blackwall against tide, I keep down on the Greenwich side, in general look toward the shore, and having my face over the left shoulder, my right hand is then above. If I go from Greenwich to London, my face is turned over the right shoulder, and the left hand is then uppermost."

(The usual position in the middle of the pull, is shown in Plate XXIII.)

The END OF THE PULL must not take place till the elbows have approached the tops of the hips, the hands are brought toward the chest, and the body is thrown well back.

There would be a loss of power, however, if the hands were brought too near the chest; and the body should not be thrown further back, than that it may easily and quickly recover its first position for the next stroke.—(Plate XXIV.)

As the water is being delivered from the sculls, the elbows sink, the wrists are bent up, and the backs of the hands are turned towards the fore-arms, in order to *feather the sculls*.—(Plate XXIV.)

In the RETURN OF THE SCULLS, the hands must remain turned up until the sculls are put into the water.—(Plate XXV.)

In the middle of the return, if the sculls are not short, or if the head and body be turned, one of the hands also goes higher than the other.

As to the DEGREE OF THE IMMERSION of the sculls.—In

the middle of the pull, the blades must be covered by the water. The learner in general dips the sculls very deep; but that ought to be avoided, especially in calm weather. In the whole of the return, the tips of the sculls should, in calm weather, be two or three inches above the water; and, in rough weather, they should be higher, in order to clear it.—(See the preceding Plates.)

The *head* ought throughout to be very moveable—first to one side, then to the other, but mostly toward the shore when against the tide.

The same movements have only to be repeated, throughout the course.

THE TIDE OR CURRENT.

In river-rowing, when THE TIDE OR CURRENT IS WITH THE ROWER, a learner should in general take the middle of the stream. In rowing with the tide, however, watermen generally cut off the points, in order to keep a straight course.

When THE TIDE OR CURRENT IS AGAINST THE ROWER, he should take the sides, preferring that side on which, owing to the course of the river, the current is least.—As there is an eddy under the points, watermen generally, when rounding them, shoot the water to the next point, and so on.

TO TURN.

Back water with one scull, by putting the one on the side you wish to turn to into the water, with its concave front or filling towards you, and pushing against it; and at the same time, *pull strongly with the other scull*; until the boat's head is turned round.

MEETING OR PASSING.

In *meeting a boat*, the one which comes with the tide must get out of the way. In this case, both boats, if close, lay the blades of their sculls flat on the water, lift them out of the rullocks, and let them drift alongside. Each replaces them when the other has passed.

In *passing a boat*, the rower who passes must take the outside, unless there is ample room within, and must also keep clear of the other's sculls or oars.

If *one boat is crossing the water, and another coming with the tide*, the one coming with the tide must keep astern of the other, and keep a good look-out ahead.

TO LAND.

Give the boat its proper direction, and keep its *head inclining towards the tide*, and its stern will turn up or down as the tide runs; unship the sculls by the manœuvre directed above; but, instead of letting them drift alongside, lay them in the boat, the blades forward and the looms aft; seize the head-fast; jump ashore; and take two half-hitches round the post or ring.

SEA-ROWING, OR ROWING IN A GALLEY
IN THE RIVER.

In launching a boat from the sea-beach, when it is rough, and there is a heavy surf, the two bowmen must get into the boat with their oars run out; and the other rowers must follow the boat quickly in her descent; but they must not jump in till she is quite afloat, lest their weight might fix her on the beach, and she ship a sea.

It may happen, that, immediately on the boat floating, a sea shall take the bow (before the rowers are sufficiently prepared with their oars to keep her head out), and place her broadside to the waves. In this situation, the boat is in danger of being swamped, and the lives of those on board are in peril.

When thus situated, it is best for two of the rowers to go near the bow of the boat, and immediately force each his boathook or oar on the ground, on the shore side of the boat, as the most effectual, safe, and expeditious method of bringing her head again to the sea.

Should there be more than a usual swell, both the rowers and the sitter, or steersman, cannot be too particular in keeping, throughout, *the head of the boat to the swell*, as lying broadside to a heavy sea is extremely dangerous.

In rowing, each man has in general *a single oar*, and sits on the opposite side of the galley from the rullock through which his oar passes.

The oar must consequently *cross the boat*, and be held on its opposite side, so as to clear the back of the man before.

The oar should be *neither held nor pulled obliquely* to the side by twisting the body, as is practised by many, because the muscles in that case act disadvantageously, and are sooner fatigued.

The *stroke must be longer* in sea than in river rowing.

The oar must be *thrown out with a heave*, caused by the simultaneous extension of the body and the arms.

It is still more essential to *feather the oar* in sea than in river rowing.

The oar must be *drawn back with great power*, caused by the simultaneous contraction of the body and arms.

Time with the other rowers must be accurately kept, and distinctly marked.

When the oars are delivered from the water, the time, until they go into it again, may be counted one, two, three,—when the oars pass through the water. This time is kept by the strokesman, or sternmost man of the rowers.

In landing, the word is “in bow,” when the bowman or foremost man, gets the boat-hook ready to clear away for the shore, or the stairs.

The next word is from the coxswain, “rowed off all,” or “well rowed;” when all the oars are laid in, with the blades forward, and the boat is made fast.

In landing on the sea-beach, when there is a surf, the rowers may watch for a smooth, and then give a good way ashore, when the bowman should instantly jump out with the headfast or penter, and pull her up, to avoid shipping sea.

The *distances run in this way* are very great. We have known four men, in a short galley, row thirty miles in four hours, namely, from Dover to eight miles below Calais, or abreast of Gravelines, on the opposite coast.

In such a row, a London waterman would have no skin left on his hands; and a member of the Funny Club would, we suppose, have no hands left on his arms!

SAILING.

BOATS, ETC.

Cutters, owing to their excellent sailing qualities, are much employed as packets, revenue cruisers, smugglers, privateers, and in all cases requiring dispatch.

The boats commonly employed in parties of pleasure, &c. are also cutters.

On the size of these vessels, however, it is necessary to remark, that a cutter under one hundred tons is sufficiently handy; but, when the size is equal to that of the larger yachts, a strong crew is necessary, as the spars are very heavy, and a number of men requisite to set or shorten sail.

As a single masted vessel, in the event of springing a spar, becomes helpless, even large cutters are used only in short voyages, or on the coast; for, in case of accident, they can always manage to reach some harbour or anchorage to repair any damage they may sustain.

The peculiar qualities of beating well to windward, and working on short tacks, adapt cutters peculiarly for channel cruising.

Although, some years back, large cutters were confined principally to the navy and revenue, the Royal Yacht Club, in theirs, have exceeded these not only in size, but in beauty and sailing qualities. Some of the finest and fastest cutters in the world are the property of this national club; and

two of them, the *Alarm* (Mr. Weld's), and the *Arundel* (the Duke of Norfolk's), measure 193 and 188 tons.

The inconvenient size, however, of a cutter's boom and mainsail has caused the very general introduction of a ketch rig, which, by the addition of a mizen, permits the boom to be dispensed with, and reduces the mainsail considerably. This rig, indeed, when the mizen stands well, is elegant; and, if a vessel is short-handed, it is very handy.

As cutter-rigged vessels, instead of a regular mainsail, with its boom and gaff, have sometimes a mere spritsail, it is necessary we should observe, that the inferior convenience and inferior safety of these preclude our noticing them here.

It is also necessary that we should explain why, in the sequel, we do not even refer to lugger-rigged vessels.

Luggers are more difficult to work or manoeuvre; they require a greater number of men; their spars are so heavy that they require all hands to move them; their decks are inevitably lumbered with spars, &c.; their canvass gets rotted from exposure; and their expense is much greater than that of cutters.

Luggers generally have two sets of lugs—large ones, which require dipping every time they tack, and small working lugs, which do not require dipping, the tack coming to the foot of the mast. The latter are generally used, except in making long reaches, across the Channel, &c.

A lugger, moreover, is seldom fit to be altered to any thing but a schooner, not having breadth enough for one mast, which, after all, is the best for beauty and speed.

Sailing men, indeed, are now so perfectly aware of the

inferior speed of luggers, that we never see a lugger or schooner enter against a cutter at all near its tonnage. At sea, luggers would have a better chance; though even there many would prefer cutters, except in foul weather and a long reach.

In short, these vessels suit only a few noblemen and gentlemen who have enough of patriotic ambition to desire to look like smugglers, enough of delicacy to disregard the being thought dirty lubbers by their own men—some of whom are not dirty from mere taste or choice, and enough of penetration not to discover, that on their landing with filthy clothes and tarry hands, every old sailor grins or laughs at their imagining, that it was they, and not the man at the helm, who had kept the canvass from cracking, or the sticks from going over the side.

Our descriptions apply, therefore, to cutters alone; and *the Plates at the end of this article illustrate the various parts therein referred to.*

Upon the Thames, the sailing clubs comprise the Royal Sailing Society, the Royal Thames Yacht Club, the Clarence, British, Royal Yacht, and several minor associations.

Several cups and prizes are annually given during the season; and the spirited contests between the beautiful small craft which form these fancy fleets, are highly interesting.

The sailing matches on the river are of two sorts—one above, and the other below the bridges. The smaller yachts, of from six to twenty-six tons, are commonly entered for the former, and a larger class for the latter, which take place between Greenwich and Gravesend.

These national amusements appear to be rapidly gaining the first place among fashionable recreations, and now occupy the season, from the period when hunting ends, till shooting begins.

The Royal Yacht Club has nearly six hundred persons on its lists, of which above one hundred are members, and about four hundred and fifty, honorary members. The number of yachts is one hundred and nine; of which eighty-seven are cutters, ten schooners, three brigs, four yawls, two ships, two ketches, and one lugger. The greater part of these vessels belong to Cowes and to Southampton; the rest, to other ports. The shipping belonging to the club amounts to 7250 tons. Now a vessel of one hundred tons seldom perhaps stands the owner in less than from five to six thousand pounds, varying from that to ten, according to the profusion of ornamental parts, the internal fittings, and other contingences. At this rate, the shipping of the club would have cost more than three millions and a half of money: but it is impossible to speak decisively on this point, as the first cost of the yachts varies much, and the numerous styles of rig are attended with expenses so widely different.

At a moderate computation, each vessel belonging to the club carries ten men on an average: this gives the total number employed 1060. During the summer months, then, while regattas are celebrated, it may be said that the Royal Yacht Club alone employs more than 1100 men. These, with some few exceptions, are discharged on the approach of winter, and the yachts are laid up for the season, retaining the master and one man in pay. The

crews thus discharged obtain employment in merchant-vessels, or otherwise, during the winter; and in the middle of spring, are generally re-shipped in the yachts in which they have previously served. On these conditions, active and industrious men of good character are generally sure of employment in the club; and many members justly pride themselves on the high discipline, manly bearing, and crack appearance of their crews. The situation of master, in particular, is one of much responsibility, and is on all accounts respectably filled. In some of the largest craft, junior officers of the navy are found to accept this office.

The sailing regulations of the Royal Yacht Club are as follows:

First—Members entering their yachts must send the names of them to the secretary one week previous to the day of sailing, and pay two guineas entrance at the same time.

Second—All vessels starting or entering must be the *bonâ fide* property of members, as well as spars, sails, boats, &c.

Third—Each member is allowed to enter one vessel only for all prizes given by the club.

Fourth—Cutters may carry four sails only, viz. mainsail, foresail, jib, and gaff-top-sail; yawls, luggers, schooners, and all other vessels, in like proportion. No booming-out allowed.

Fifth—No trimming with ballast, or shifting of ballast allowed; and all vessels to keep their platforms down, and bulkheads standing.

Sixth—Vessels on the larboard tack must invariably give way for those on the starboard tack ; and in all cases, where a doubt of the possibility of the vessel on the larboard tack weathering the one on the starboard tack shall exist, the vessel on the larboard tack shall give way ; or, if the other vessel keep her course, and run in to her, the owner of the vessel on the larboard tack shall be compelled to pay all damages, and forfeit his claim to the prize.

Seventh—Vessels running on shore shall be allowed to use their own anchors and boats actually on board to get them off, afterwards weighing anchor and hoisting the boat in ; but, upon receiving assistance from any other vessel or vessels, boats, or anchors, shall forfeit all claim to the prize.

Eighth—That nothing but the hand-line be used for sounding.

Ninth—Any deviation from these rules shall subject the aggressor to forfeit all claim to the prize.

Tenth—If any objection be made with regard to the sailing of any other vessel in the race, such objection must be made to the stewards within one hour after the vessel making the objection arrive at the starting-post.

Eleventh—No vessel shall be allowed to take in ballast, or take out, for twenty-four hours previous to starting ; and no ballast shall be thrown overboard.

Twelfth—Vessels shall start from moorings laid down at a cable-length distance, with their sails set ; and every vessel not exceeding one hundred tons shall carry a boat not less than ten feet long ; and vessels exceeding one hundred tons, a boat not less than fourteen feet long.

Thirteenth—There shall be a member, or honorary member, on board each vessel.

Fourteenth—The time of starting may be altered by the stewards; and all disputes that may arise are to be decided by them, or such persons as they shall appoint.

The Northern Yacht Club is a highly interesting society, although its plan is not so extensive as that of the Royal Club. It contains about three hundred and fifty members. The documents for 1830 comprise ninety-two in the Scottish, and ninety in the Irish division, with fifty-two honorary members, in addition to ninety-three members of the Cork Yacht Club, who are also entered on the honorary lists. It had, in 1830, sixty yachts, not equal in proportion to the tonnage of the Cowes Club, as smaller vessels are admitted. Many R. Y. C. men are found in the Northern Club. There are many fine vessels in this club. Cutters, as usual, excel in number.

At the lowest computation, the number of vessels at present employed for pleasure in this country cannot be less than from three to four hundred, ranging in bulk from ten to three hundred and fifty tons. These are variously distributed along our shores, carrying their opulence into every port and harbour. But there is another advantage arising from yacht clubs—namely, that national spirit which, to a maritime people, is above all in worth. The yacht clubs keep alive this feeling in an eminent degree.

COURSES, ETC.

Even in describing the very elementary nautical operations which such boats require, it is necessary to lay down a position for the HARBOUR, direction for the WIND, and trip for the VESSEL.

Let us suppose, then, that the mouth of the harbour lays towards the south; that the wind blows from the north, with a little inclination to east, and that we wish first to sail due south to get out of the harbour, next direct our course eastward, then return westward till we get abreast the mouth of the harbour, and lastly, northward, to enter the harbour and come to our moorings.

These courses will, with variations in the force of the wind, illustrate every common and useful manœuvre.

GETTING UNDER WEIGH.

Ship * the tiller. †

Set the mainsail; ‡ hoist the throat § nearly close up; and half hoist the peak. ||

Bend ¶ and haul the jib out to the bowsprit end.

* Fix in its proper place.

† The piece of wood or beam put into the head of the rudder to move it.

‡ Unfurl it by casting the stops or gaskets off, and lash it to the hanks on the forestay.

§ The foremost end of the gaff, or that end next the mast.

|| The outermost end of the gaff, or that farthest from the mast.

¶ Hook it to the traveller, or ring on the bowsprit.

Bowse the bobstay,* and bowsprit shrouds† well taut.
Hoist the jib, and bowse it well up.

Get the topmast stay,‡ backstays,§ and rigging || well taut.

Hoist the foresail ready to cast ¶ her when the moorings are let go.

Send a hand to the helm.**

Overhaul the mainsheet,†† and the lee‡‡ runner and

* A rope or chain from the end of the bowsprit to half way down the stem.

† Ropes from the bowsprit end on each side to the bows.

‡ A rope from the topmast head to the outer end of the bowsprit, where it passes through a sheave or small block, comes in by the stem head, and is belayed or made fast (done generally by winding several times backwards and forwards in the manner of a figure 8), to its cleat or pin.

§ Ropes from the after-part of the head of the topmast to the after-part of the channels on each side.

|| Or shrouds—ropes from each side the top-mast-head, through the cross-tree arms, to the fore part of the channels, between the first and second lower shroud. They are set up or hauled taut, as are the backstays, by means of a small tackle, one block of which is hooked to the thimble spliced into the lower end of the shroud or backstay, and the other to an eye-bolt in the channels.

¶ To turn her head in the most advantageous direction.

** This term includes both the tiller and the wheel; but, as the yawing motion of a small light vessel is correspondingly light and feeble, though much quicker than that of a large vessel, she is best without a wheel, which is meant to gain power at the expense of time.

†† A rope or tackle for regulating the horizontal position of the main boom.

‡‡ The leeward or lee-side is the opposite to windward.

tackle; * and lower the throat, and hoist the peak of the mainsail taut † up.

Hoist the gaff topsail, ‡ keeping the tack § to windward || of the peak halyards, ¶ and hauling the slack of the sheet out before you hoist the sail taut up.

Set the tack, and heave the sheet well taut.

BEFORE THE WIND. * *

With the Main Boom over to Starboard. ††

In managing the helm, be careful not to jibe the mainsail.

When a vessel is going large, ‡‡ the helmsman should always place himself on the weather side of the tiller, or

* A compound tackle, used in cutter-rigged vessels, instead of a backstay to the lower mast, on account of its easy removal allowing the main beam to go forward, in going large.

† The nautical way of pronouncing and writing *tight*.

‡ The sail above the mainsail. The sheet hauls out to a small block on the outer end of the gaff.

§ Tack is the lowermost corner opposite to the sheet, in all fore and aft sails and studding sails.

|| The windward or weather side, is that side on which the wind blows.

¶ The rope by which the peak of the gaff or boom, to which the head of the mainsail is fastened, is hoisted. Halyards always signifies a rope by which a sail is hoisted.

* * That is, going the same way the wind blows. Her course is then sixteen points from the wind. (See Compass.)

†† Starboard is the right, and larboard the left hand side, when looking toward the head of the vessel.

‡‡ Or free, not close-hauled. Generally understood as having the wind abaft the beam, or that her course is then eight points from the wind.

the side opposite to that the main boom is over, as his view of the vessel's head will then be unobstructed by the sails.

The boat now running before the wind, haul the tack of mainsail up.

If the wind come dead aft, you may flatten aft the jib and foresail sheets,* or haul the foresail down to prevent chafing.

If the wind come at all round on the starboard quarter;† slack off the boom guy;‡ haul in the main sheet till you get the boom a-midships§ or nearly so; port || the helm, and jibe the mainsail; slack off the main sheet again, and hook the guy on the larboard side; haul taut the starboard runner and tackle, and overhaul the larboard one; the same with the topping lift; ¶ hoist the head sails,** and shift the sheets over.

* Ropes fast to the aftermost lower corner of the jib and foresail, to hold them down. The jib has two ropes or sheets, fast to its corner, one of which comes on each side the forestay, for the convenience of tacking, &c. The foresail has only one sheet, which is fast to the traveller or ring, on the horse or bar of iron, which crosses from one gunwale to the other, just before the mast.

† The point on either side where the side and stern meet.

‡ A small tackle, one end of which is hooked to the main boom, and the other forward, to keep the boom from swinging.

§ Midway between the sides of the vessel.

|| Instead of larboard, when speaking of the helm, port is the proper term, in contrariety to starboard, used for the sake of distinctness in directing the helmsman.

¶ Stout ropes which lead, one from each side the main boom, near its outer end, through a block on its respective side the mast, just under the cross trees, whence it descends about half way, and is connected to the deck or gunwale by a tackle.

** Jib and foresail.

N. B. If you are obliged to jibe as above, you must, in the following directions for bringing the wind on your beam, read larboard, for starboard, and *vice versa*.

BRINGING THE VESSEL WITH THE WIND ON THE
LARBOARD BEAM.*

Supposing that you have not jibed, starboard the helm a little, and let the vessel spring her luff † with her head to the northward.

Slack the boom guy, and haul in the main-sheet.

Haul aft ‡ the jib sheet, and bowline § the foresail.

If she come up fast, port the helm || a little, and meet her, then right ¶ it, when she lays her proper course.

Hook and haul taut the lee runner and tackle.

You will now find it necessary to carry the helm a little a-port or a-weather.

* That is, athwart or across the waist of the vessel: called a beam, because it is in the same direction that her beams lay, or at right angles with her keel. Her head is then eight points from the wind.—The wind is said to be abaft the beam, or before the beam, according as the vessel's head is more or less than eight points from the wind.

† Sail nearer to the wind.

‡ That is, toward the hinder part or stern.

§ A rope made fast to the foremost shroud, and passed through a thimble in the after-leach of the foresail, then round the shroud again, and round the sheet.

|| Always put the helm the contrary way to that which you want the vessel's head to turn.

¶ That is, bring it a-midships: the same with *steady*.

If, instead of directing our course eastward, we had preferred doing so westward, we must have jibed previous to bringing the wind on the beam, and then the preceding operations would necessarily have been, to a corresponding extent, reversed.

CLOSE HAULING THE VESSEL.*

To haul the vessel to the wind; ease the helm down † a little.

Haul in the main-sheet upon the proper mark.

Bowse the fore-sheet, and haul the jib-sheet well aft.

Bowse the runner and tackle well taut.

The vessel is now on the wind, plies to windward, or is close hauled. ‡

Being now apt to gripe, or come up into the wind with a sudden jerk, now and again, she will carry her helm more or less a-weather.

The helmsman must watch the weather-leach of the mainsail, to prevent the vessel getting her head in the wind.

* To haul the sheets aboard, or more a-midships, by means of which the vessel's head will come closer to the point the wind blows from.

† To leeward.

‡ These terms all imply one thing, viz. that the vessel is sailing as near as possible to the point whence the wind blows. No square rigged vessel will sail within less than six; and no fore and aft rigged vessel, within less than five, points of the wind, to have any head way.

TACKING.*

Having got abreast or opposite the mouth of the harbour, haul the fore bowline. "Ready about."†

Put your helm up, or to windward a little, and let the vessel go rather off the wind, to get good way on her; then gently down, or to leeward with it, which is announced by the helmsman calling, "Helm's-a lee."

Let fly the jib-sheet: this takes off the balance of wind from her head, and acts in concert with the helm in sweeping her stern to leeward, or rather in allowing her head to come quicker up into the wind.

The man who attends the jib-sheet must carefully gather in the slack‡ of the one opposite to that which he let go.

When the jib comes over the larboard side of the stay,§ haul the larboard jib sheet well aft.

* To turn a vessel from one side to the other, with her head toward the wind. When a vessel is obliged to tack several times successively to get to windward, she is said to be beating to windward; when to get up or down a harbour, channel, &c., beating up or down, &c.; when trying to get off a lee shore, clawing off.

A vessel's tacks are always to windward and forward; and her sheet, to leeward and aft: whence the terms larboard or starboard tacks, meaning that she has her tacks aboard on the larboard or starboard side.

† A command, that all hands are to be attentive, and at their stations, for tacking.

‡ Or loose rope.

§ The fore stay, or large rope, from the lower mast head to the stem head, to prevent the mast from springing when the vessel is sending deep, or fallen into the hollow between two waves, after pitching.

When the mainsail is filled, let draw the foresail.*

Right the helm, and shift over the tack of the mainsail.

One hand should attend the main-sheet, to gather in the slack till the boom is a-midships, and then ease it off as the sail fills, and the vessel lays over to port.

When the vessel is in stays, and it is doubtful where she will come round, or in order to make her come round when she goes astern, shift the helm to the opposite side.

Now the vessel is about, upon the starboard tack.

REEFING, TAKING IN SAIL, ETC.

Haul the fore-sheet up to windward; bowline it there; and heave her to.

Keep the tiller shipt, and lash it a-lee.

Take in the gaff topsail; lower the halyards; and haul down.

Have a hand aloft to unbend the sheet from the sail, and make it fast to the main halyard bolt; and unlash the gaff topsail, and send it down.

Lower the main halyards and peak to the second reef cringle; and reef the mainsail.

* That is, let go the bowline which holds the sail to this, now, weather shroud. It was held there till now, that the wind might act upon it with greater power to turn the vessel, from the time her head was about half way round. The expression is derived from its being necessary, in larger vessels of a similar rig, to ease the rope gradually as the sail draws it. From the time the jib sheet is let fly, till the foresail is let draw, the vessel is said to be *in stays*.

Hook the reef tackle* to the first earing; † haul upon it till the cringle ‡ is close down upon the boom; and belay the tackle.

Pass a small gasket § through the tack, and the first reef cringle, and lash the two firmly together, taking care to gather in snug the luff of the sail, so that the leach rope belonging to it forms a sort of snake near the mast.

Haul up the tack, and bowse upon the weather peak line, keeping the other part fast a-midships of the boom. This will hold the belly of the sail partly to windward, and make it easier to tie the reef-points. Observe to keep the foot rope outside and under the sail.

Let one man jump upon the boom to tie the outer points so far that the rest can be tied on board.

Let go the tack and the peak line, always keeping the ends of this fast under the boom.

¶ Hoist the sail taut up; and set taut the tack tackle.

* A small tackle formed of two hook blocks, one of which is hooked to the under part of the boom about one third from the mast, and the other farther aft. The fall is belayed to a cleat under the boom.

† A stout rope, one end of which is made fast to the boom at the same distance from the mast as the reef cringle to which it belongs. It ascends, passes through the cringle, descends and passes through a sheave on the side of the boom, then in board, and is stopped to the boom by means of its lanyard or small line spliced into its end for the purpose. This lanyard is also to make it fast when the sail is reefed and you wish to remove the tackle.

‡ A short loop of rope with a thimble or small ring of iron inside it, spliced to the leach of the sail.

§ A rope made by plaiting rope yarns.

Shift the jib to No. 2.

Overhaul the jib purchase; let go the outhaul; haul the jib down; unhook the tack; unbend the sheets; and send the sail down below.

You have now got one reef in the mainsail. If it come on to blow harder, and you want a second reef, lower the sail, and haul on the peak line as before; nipper the first reef earing so as to hold it a short time; let go the reef tackle, and unhook it from the earing, which make fast with its lanyard round the boom.

You have now got the tackle to use for the second reef. Proceed as for the first reef.

Shift the jib to No. 3, and proceed as before.

If a third, the same, after rigging the bowsprit.

Take the fid* or bolt out of the heel of the bowsprit, and rig the bowsprit in about one fid hole.

Haul taut the topmast stay and bowsprit rigging.

Bend and set the small jib in the same way as any other.

You may want to stow the mainsail, set the trysail, and make her otherwise snug in proportion.

Sway away upon the top rope; lift the mast a little to let the man unfid it; and lower the topmast down in the slings.

Lower the fore halyards; and reef the foresail.

Gather the luff of the sail up; make the foremast reef

* A bar of wood or iron, which passes horizontally through a hole in each bitt and the heel of the bowsprit, to secure it in its place, much in the same way that a carriage pole is secured.

earing cringle fast as the tack ; shift the sheet from the clue of the sail to the after reef cringle ; and tie the points.

If the weather is very heavy, haul down the stay sail, and tend the vessel with a tackle upon the weather jib sheet.

When it comes fine weather again, make sail in precisely the reverse order to that in which you shortened it.

Continue to tack in the wind's eye till you are to windward of the harbour.

PASSING OTHER VESSELS.

All vessels sailing before the wind keep out of the way of those upon wind.

In the river Thames, vessels which sail with the larboard tack aboard, keep away for those with the starboard tack aboard.

BRINGING THE VESSEL INTO HARBOUR.

Lower and haul down the gaff top-sail.

Let go the jib tack or outhaul ;* lower the jib ; and pull on the down hauler, to bring the traveller in.

Haul the tack of the mainsail up ; and lower the peak.

Down foresail.

Let a small boat run away the warp to the quay.

Lower, and stow the mainsail.

Unbend the jib, and stow it below, if dry and not immediately wanted, and hook the halyards to the traveller,

* A rope made fast to the traveller, to haul it out to the bowsprit end.

close in by the stem. If otherwise, hoist upon the hal-yards, and let it hang to dry if it require it, or stop it up and down the foremost shroud.

Haul the vessel to the moorings, and moor properly, putting fenders over to keep her from the quay.

DESCRIPTION OF PLATE XXVI.

Fig. 1.

The mariner's compass.

Fig. 2.

Plan of the deck, with the bowsprit rigged out, &c.

- | | |
|-------------------------|-----------------------------|
| 1. Bowsprit. | 9. 9. Channels. |
| 2. 2. Bowsprit shrouds. | 10. Main hatchway. |
| 3. Stern head. | 11. Companion and binnacle. |
| 4. Bowsprit bitts. | 12. Tiller. |
| 5. Fore hatchway. | 13. Cabin skylight. |
| 6. Windlass and bitts. | 14. Rudder-head and case. |
| 7. Fore sheet horse. | 15. Taffril. |
| 8. Place of the mast. | |

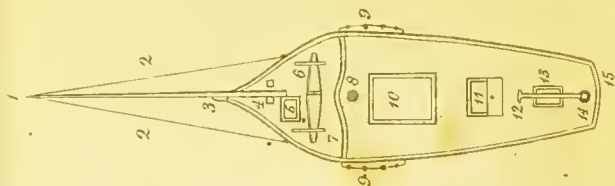
PLATE XXVII.

Pleasure boat, cutter-rigged, laying at anchor; foresail and mainsail bent and stowed.

- | | |
|----------------------|--------------------|
| 1. Vane and spindle. | 5. Trussel trees. |
| 2. Truck. | 6. Lower mast. |
| 3. Topmast. | 7. 7. Cross trees. |
| 4. Cap. | 8. Bowsprit. |

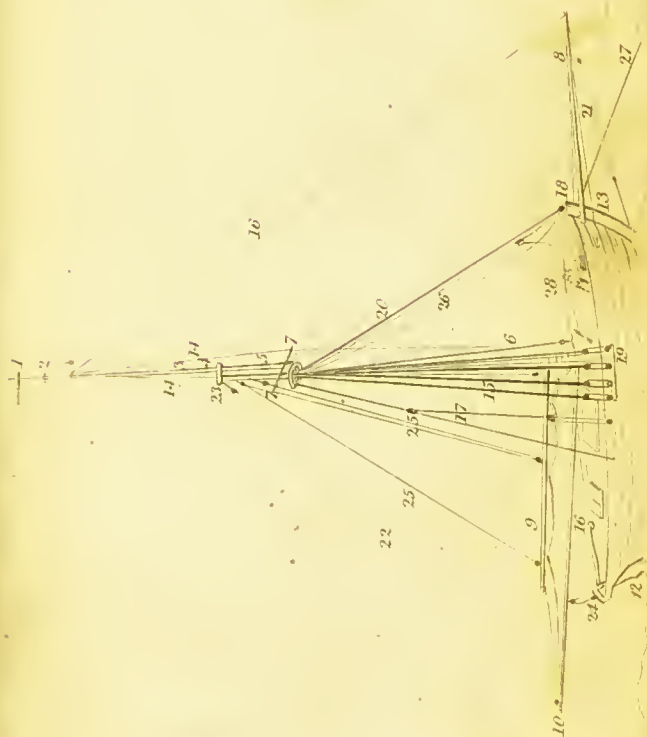


The Mariner's Compass.



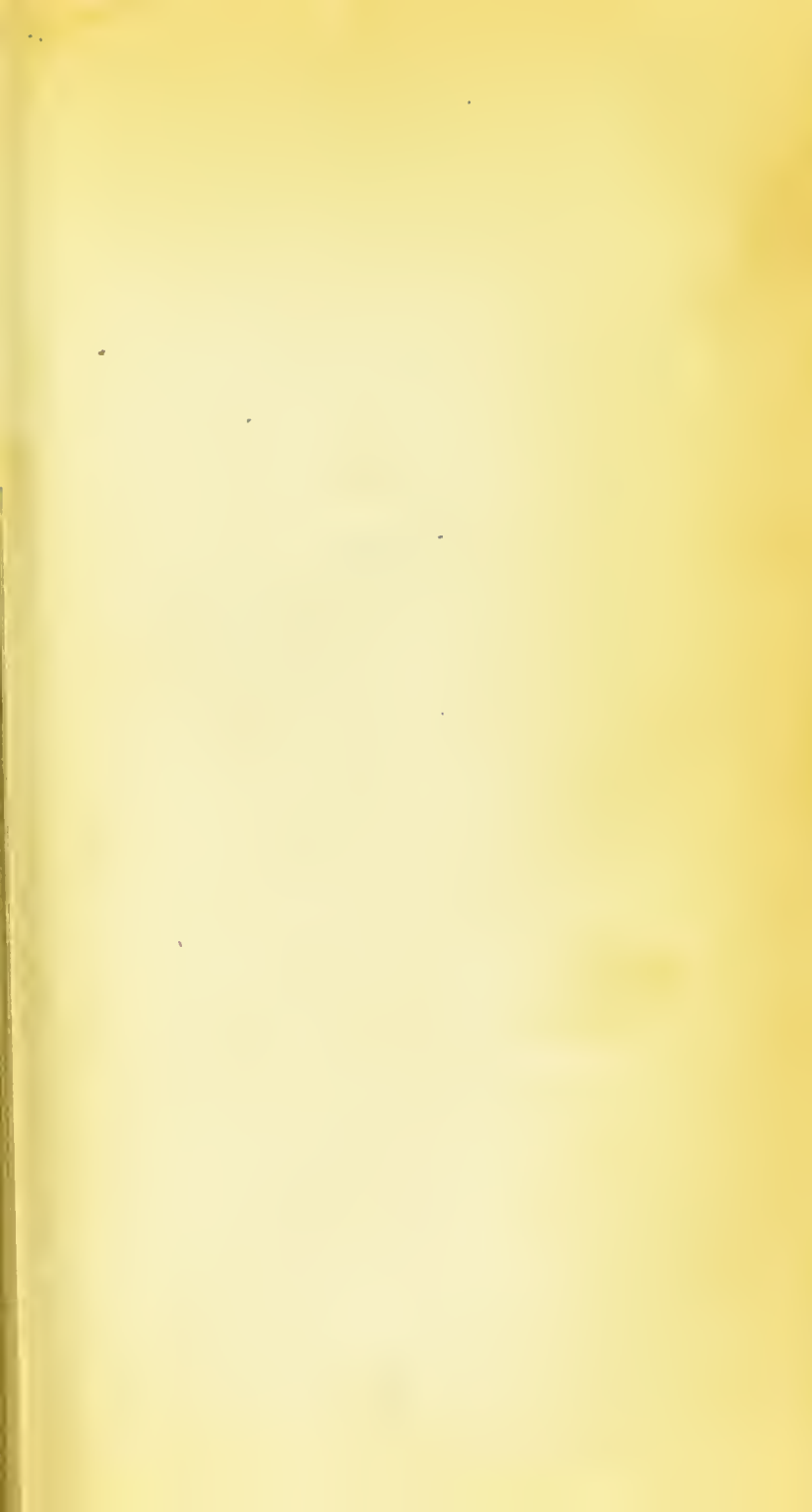
Plan of the Deck.





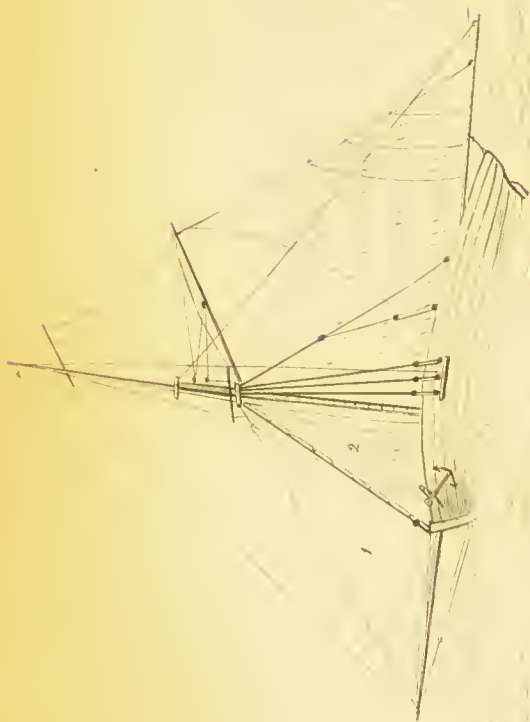
Parts in Pleasure Boat at Anchor





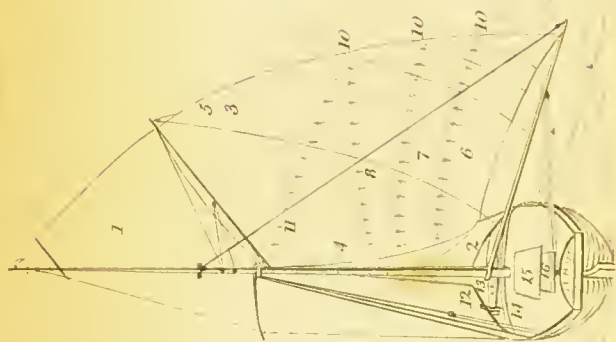






Boat with a breeze on the larboard beam





Boat before a light breeze

- | | |
|--------------------------------|---|
| 9. Gaff, with mainsail furled. | 20. Forestay, with the foresail furled to it. |
| 10. Main boom. | 21. Bobstay. |
| 11. Tiller. | 22. Topping lifts. |
| 12. Rudder. | 23. Topping lift blocks. |
| 13. Stem. | 24. Main sheet. |
| 14. 14. Topmast shrouds. | 25. 25. Peak halyards. |
| 15. Topmast backstay. | 26. Jib halyards. |
| 16. Topmast stay. | 27. Cable. |
| 17. Runner and tackle. | 28. Foresheet. |
| 18. Traveller. | |
| 19. Channel. | |

PLATE XXVIII.

The vessel going down the harbour with all sails set, steering south, before a light breeze.

- | | |
|-----------------------------------|-----------------------------|
| 1. Gaff topsail. | 10. 10. 10. Cringles. |
| 2. Foresail. | 11. Balance reef. |
| 3. Mainsail. | 12. Anchor stock. |
| 4. Tack tricing line. | 13. Windlass. |
| 5. Peak line, or signal halyards. | 14. Foresheet horse. |
| 6. 7. 8. The 1st, 2d, 3d reefs. | 15. Main hatch. |
| 9. 9. 9. Reef earings. | 16. Companion and binnacle. |

PLATE XXIX.

The vessel outside the harbour, steering east, with a smart breeze on the larboard beam.

- | | |
|--------------|-------------------------------------|
| 1. Jib. | 3. Anchor. |
| 2. Foresail. | 4. Eyebolt of the bowsprit shrouds. |

PLATE XXX.

The vessel trying for the harbour in a heavy gale, close to the wind as she can lay, on the starboard tack, under a reefed mainsail and foresail, bowsprit reefed, and topmast lowered.

RIDING.

GENERAL STYLE IN RIDING.

The general art of riding, sometimes called *manège* riding, to distinguish it from its modifications in road-riding, hunting, racing, &c., teaches us to place every part of the body so that it can act upon the horse in every emergency, shows the effect of all the aids or modes of guiding him, and enables us to render him obedient to the slightest touch.

By never suffering the ascendancy to be transferred to the horse, by in general preventing him from making all his speed, and by exhausting him the sooner the more he exerts himself without permission,—this method bestows upon the rider perfect security.

This method, indeed, is the foundation of the art, and that without which the greatest excellence cannot be attained.

An intimate knowledge of this method is necessary, even to our abandoning it when convenient, to our adopting the styles, afterwards to be described, for more extended and rapid paces, or for long continued riding, to our suffering the horse to take more or less of ascendancy, and to our, when necessary, easily recovering that superiority of the hand, of which those who are ignorant of this fundamental method are less capable.

THE SADDLE.

Fig. 1.

- a.* the pommel.
- b.* ... cantle.
- c.* ... panel.
- d.* ... flaps.
- e.* ... stirrup leather.
- f.* ... girths.

BRIDLES.

Fig. 2.

- a. b.* the headstall with the cheekstraps.
- c.* ... of the curb.
- d.* ... of the bridoon or snaffle passing through it over the poll.
- e.* the nosestrap (seldom found in any but military bridles.
- f.* the throatlash.

Fig. 3.

A twisted snaffle-bit.

Fig. 4.

A plain snaffle-bit.

Fig. 5.

A Weymouth curb, with chain and chain-strap (*a*) attached.

Fig. 6.

A common curb bit, with the upset in the mouth-piece.

THE HORSE AND EQUIPMENTS.

Plate XXXI. and XXXII. give better ideas of the horse and his equipments than the longest and most detailed description. The reader will therefore examine them in succession.

We have here only to add those circumstances as to the equipment of the horse, which could not be communicated by that otherwise briefer and more impressive method.

The SHOES of a horse have much to do with his, and consequently with his rider's comfort. It is therefore important to know that he is properly shod.

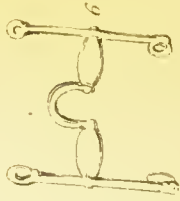
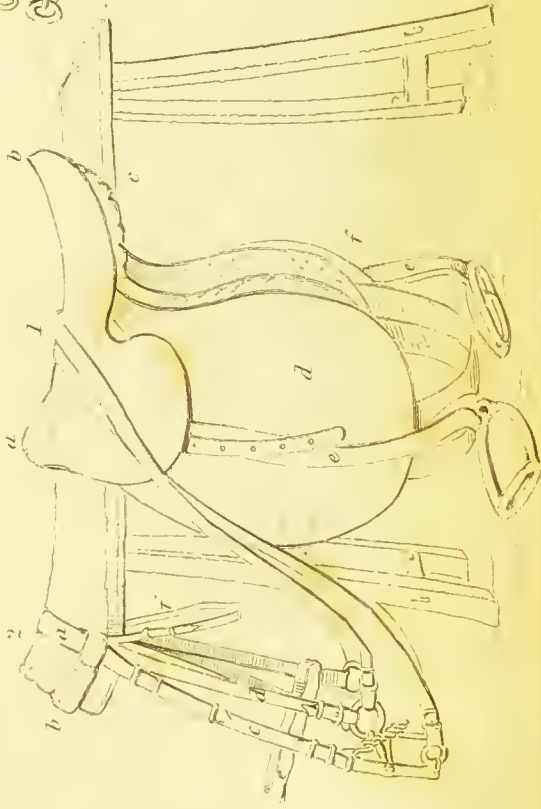
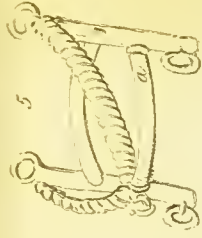
To effect this, the shoe should be fitted to the foot, and not the foot to the shoe.

Neither heel nor frog should be pared more than merely to take off what is ragged ; for no reproduction takes place here, as in the case of the hoof. Farriers ruin nearly all horses by doing otherwise. Indeed, they are not to be trusted with this operation, which, after shoeing, any gentleman may perform with his pocket-knife.

The sole of the foot, then, must not be hollowed out, but only the outer wall pared flat or even with the sole, and most at the toe. Nor, above all things, ought the farrier's finishing rasp all round the edge of the horn immediately above the shoe to be permitted. Neither ought nails to be driven far backward towards the heel, where the horn is softer and more sensible, especially at the inner quarter.

When a horse has a high heel, the foot, except the frog, may be pared flat, but not hollowed out or opened. When

3
Chariot



Horse Equipments.



A horse has a low heel, the foot should be pared only at the toes. When a horse has a short pastern, he should have a short shoe, because a long one would compel him to bring his heel more backward than the unpliableness of his pastern would easily admit.

The SADDLE should be proportioned to the size of the horse. Before, the bearings should be clear of the plate-bone; behind, they should not extend further than within four inches of the hips; and their pressure should be equal on every part intended to be touched. The closer the saddle then comes, the better, if neither the weight of the rider, nor settling of the panel, can possibly injure the withers or chine.

Before mounting, the rider should examine whether the saddle, girths, straps, bits, bridle, &c. are all good and well fixed.

When the saddle is on the horse, the lowest part of the seat should be rather behind its centre, as it is there that the weight of the body should fall, and by that means that the thighs can keep their proper position. The best test of the adaptation of the seat is, when the rider, without stirrups or effort, easily falls into his proper place in the saddle.

STIRRUPS should not be used until the pupil is capable of riding without them.

The proper length of the stirrup is, when the upper edge of the horizontal bar reaches a finger's breadth below the inner ankle-bone. When the feet are in the stirrups, the heels should be about two inches lower than the toes.

No more than the natural weight of the limbs should be

borne in the stirrups. It is by an accurate position, and an easy play of the ankle and instep, that the stirrup is retained, so as to slip neither forward nor backward, even if the toe be raised for a moment.

The position on horseback with stirrups, differs from that without stirrups, only in this, that the thigh being, by the stirrup, relieved from the weight of the leg and foot, the knee is slightly bent, and rather before the line which these form in the position without stirrups.

In hussar riding, hunting, &c. the breadth of four fingers should intervene between the fork and the saddle, when the rider stands up.

Spurs should never be used but by an accomplished rider.

When it is necessary to employ them, they should be applied a few inches behind the girth, as low as possible, and with the lightest touch capable of producing the effect.

As to the BRIDLE,—in order to give the greatest possible ease to the snaffle, a large and polished bit is necessary. Most bits are too small and long, bend back over the bars of the horse's jaw, work like pincers, and cut his mouth.

To give the greatest degree of severity, the bit while hot is twisted into a spiral form, so as to present to the jaw a rough and sharp surface, capable of pressing the bars or lips with greater or less severity.

The degrees of punishment which this bit is capable of inflicting, are generally sufficient for all the purposes of correction. It is therefore best to ride with a snaffle, and to use a curb only occasionally.

In all cases, the rider should observe, that the horse is furnished with a bit proper for him. If too light, it may have the effect already described. If too heavy, it may incline him to carry the head low, or to rest upon the hand, which jockies call "making use of a fifth leg."

The simplest and most useful of the *curb* kind is the Weymouth bit, which consists of a strong plain mouth-piece, of uniform thickness, without any upset, but merely a curve forwards, to give ease to the tongue.

The centre of the *reins* should be accurately marked; and, when both reins are held in one hand, and the near rein has to pass under the little finger, and over the forefinger, on the outside of the off-rein, the latter should be held about half an inch shorter, and the centre should be brought proportionally toward the left.

In *adjusting the bridle* on the horse's head, the headstall, parallel to and above the cheekbone, must have its length so regulated as to permit the mouth-piece of the curb to rest on the bars, an inch above the lower tusches in horses, and about two inches above the corner teeth in mares which have no tusches. The nose-band, lying under the snaffle headstall, must be buckled so loosely that a finger can pass freely under it and over the horse's nose.—The bit of the snaffle must be higher, but not so much so as to wrinkle the corner of the mouth. The throatlash must be buckled rather loose. The mane is usually cut close under the headstall; the finger clears any part of the fore-top interfering with it; and the remainder, when combed smooth, is put either over or under the front.

If the rider uses a curb, he should make it a rule to hook

on the chain himself; for the quietest horse may bring his rider into danger, if the curb hurt him.

The curb-chain must pass under the snaffle. The rider should therefore put his right hand under the snaffle reins to take hold of the curb chain, and introduce two fingers of his left within the cheek of the bit, and, aiding these with his thumb, take hold of the curb hook. The end links of the curb-chain being in his right hand, he should turn the chain to the right and under, or as he would a screw, till every link lies flat and smooth, and then, without losing a half turn, put that link on the hook which appears to be neither tight nor slack. The finger should pass between the horse's jaw and the curb, which in this case hangs down upon his under lip.

It is necessary also to see how it operates. If the branch has liberty to move forty-five degrees, or to a right angle, it is the degree which is in general best. If, however, one link of the chain confine it to thirty-five degrees, and if one link lower give it fifty-five degrees, then the manner of the horse's carrying his head must determine which is most proper: if the horse naturally carry his nose high, the branch may have fifty-five, if he bring his nose in, he should have thirty-five degrees.

If there be a chain-strap, it must be placed so high on the branch, that when passed through the ring in the curb chain, it may be buckled tight enough to prevent the horse lodging the branch on his teeth.

When a horse's head is steady, when he is light in the hand, and can obey its motions with ease, and when he can stop readily, the bit is properly adjusted. On the









contrary, if he open his mouth as if gagged, writhe his jaws, draw his tongue above the mouth-piece, or thrust it out sideways, if he fear the impression of the bit, have no appuy, toss his head up and down, carry it low, and endeavour to force the hand, or refuse to go forward, or run backward, the bit is not properly adjusted.

MOUNTING AND DISMOUNTING.

In MOUNTING, the rider,—presenting himself, rather before the horse's shoulder, with his left breast towards that shoulder, and with his whip or switch in his left hand,—takes, with the right hand, the snaffle reins in the centre;—introduces the little finger of the left hand between them from before, the back of that hand being towards the horse's head;—places the left hand below the right on the neck of the horse, about twelve inches from the saddle;—draws with the right hand the reins through the left, and shortens them, till the left has a light and equal feeling of both reins on the horse's mouth;—throws, with the right hand, the reins to the off side;—takes, with the same hand, a lock of the mane, brings it through the left hand, and turns it round the left thumb;—and closes the left hand firmly on the mane and reins.

The right hand, after quitting the mane, lays hold of the left stirrup, the fingers being behind, and the thumb in front of it;—the left foot is raised and put into the stirrup as far as the ball of it, (Plate XXXIII.);—the right foot is then moved until the rider's face is turned to the side of the horse, and looking across the saddle;—while the right hand is placed on the cantle, the left knee is placed against

the saddle on the surcingle, with the left heel drawn back, to avoid touching the horse's side with the toe;—by a spring of the right foot from the instep, not by any pull with the right hand, the rider raises himself in the stirrup, the knees firm against the saddle, the heels together but drawn back a little, and the body erect, and partially supported by the right hand (Plate XXXIV.);—the right hand moves from the cantle to the pummel, and supports the body;—the right leg at the same time passes clearly over the horse's quarters to the off side;—the right knee closes on the saddle;—the body comes gently into it;—the left hand quits the mane, and the right the pummel.

The left or bridle hand, with the wrist rounded outwards, is placed opposite the centre of the body and at three inches distance from it;—the right hand is dropped by the side of the thigh;—the stirrup is taken instantly with the right foot, without the help of hand or eye;—the clothes are adjusted;—and the whip is exchanged from the left hand to the right, being held with the lash upwards, but inclining a little towards the left ear of the horse, and never leaving the right hand, except while mounting or dismounting.—(Plate XXXV.)

The horse is to be accustomed to stand till the rider request him to move. The habit of unsteadiness is acquired from grooms, who, on going out to water and exercise, throw themselves over a horse from some elevation and give a kick to the animal even before being fairly upon it.

If a groom attend at mounting, he ought not to be suffered to touch the reins, but only that part of the bridle which comes down the cheek.

IN DISMOUNTING, the whip is to be returned into the left hand ;—the right hand takes hold of the rein above the left ;—the right foot quits the stirrup ;—the left hand slides forward on the rein, to about twelve inches from the saddle, feeling the horse's mouth very lightly ;—the right hand dropping the reins to the off side, takes a lock of the mane, brings it through the left, and twists it round the left thumb ;—the fingers of the left hand close on it ;—the right hand is placed on the pummel ; the body being kept erect.

The body is supported with the right hand and left foot ;—the right leg is, without touching the horse's hind-quarters or the saddle, brought gently to the near side, with the heels close, care being taken not to bend the right knee, lest the spur should touch the horse ;—the right hand passes at the same time to the cantle, to preserve the balance, as in the act of mounting ;—the body is gently lowered until the right toe touches the ground ;—resting on the right foot, the left stirrup is quitted, and the left foot placed in line with the horse's hoofs ;—the hands remaining as in the former motion.

Both hands then quit their holds of the mane and cantle ;—and the right hand lays hold of the snaffle rein near the ring of the bit.

IN MOUNTING WITHOUT STIRRUPS,—after taking up the reins, instead of seizing the mane, the rider lays hold of the pummel and cantle, and, by a spring of both legs from the insteps, raises the body to the centre of the saddle.

By a second spring of both arms, the right leg is carried over the horse, and the rider enters his proper seat by closing the knees on the saddle, and sliding gently into it.

IN DISMOUNTING WITHOUT STIRRUPS, on either side of the horse, the rider throws the weight of the body on the hands placed on the pommel, and, by a spring, raises the body out of the saddle before the leg is brought over the horse.

THE SEAT.

The seat must be understood in an extended sense as the disposition of the various parts of the body, in conformity with the action of the horse; and its effect is the rider's being firm in the saddle, when he might be otherwise thrown forward over the horse's head, or backward over his tail.

The FUNDAMENTAL SEAT is that intermediate one of which all others are modifications, and in which the rider sits when the horse is going straightforward, without any bend in his position.

In describing this, it is first necessary to consider the rider's relation to the horse.—He must sit on that part of the animal's body which, as he springs in his paces, is the centre of motion; from which, of course, any weight would be most difficultly shaken. The place of this seat is that part of the saddle into which the rider's body would naturally slide were he to ride without stirrups. This seat is to be preserved only by a proper balance of his body, and its adaptation to even the most violent counteractions of the horse. Turf jockies necessarily sit further hack, that they may employ the pulls.

It is necessary to consider the horseman in various parts and to explain their different functions: 1st, the lower part, as being here the principal one, namely, the thigh:



The Seat.



with the legs as dependent on them ; 2dly, the upper part, namely, the body, with the arms as dependent on it.

The thighs, from the fork to the knees, are commonly called the immovable parts, and upon them the whole attitude depends. They must not wriggle or roll, so as either to disturb the horse, or render the seat loose ; but they may be relaxed when the horse hesitates to advance.

The legs occasionally strengthen the hold of the thighs by a grasp with the calves ; and they likewise aid, support, and chastise the horse.

The body, from the fork upwards, must always be in a situation to take the corresponding motion, and preserve the balance.

The position of the arms is dependent on that of the body, but they also exercise new functions.

As a good seat is the basis of all excellence in riding, we shall consider these parts in detail.

In relation to the THIGHS, the rider, sitting in the middle of the saddle, must rest chiefly upon their division, vulgarly called the fork, and very slightly upon the hips. The thighs, turned inward, must rest flat upon the sides of the saddle, without grasping ; for the rider's weight gives sufficient hold, and the pressure of the thighs on the saddle would only lift him above it. The knees must be stretched down and kept back, so as to place the thighs several degrees short of a perpendicular ; but no gripe must be made with them, unless there be danger of losing all other hold.

If the thighs are upon their inner or flat side in the saddle, both the LEGS and the feet will be turned as they ought to be. Thus turned, they must be on a line parallel to that of the rider's body, and must hang near the horse's sides, but must not touch; yet they may give an additional hold to the seat, when necessary, and the calves must act in support of the aids of the hands. The heels are to be sunk, and the toes to be raised, and as near the horse as the heels, which prevents the heel touching the horse.

As to the BODY.—The head must be firm, yet free. The shoulders must be thrown back, and kept square, so that no pull of the bridle may bring forward the shoulder. The chest must be advanced. The small of the back must be bent a little forward.

The upper parts of the ARMS must hang perpendicularly from the shoulders. The lower parts must be at right angles with the upper, and form a horizontal line from the elbow to the little finger. The elbows must be lightly closed to the hips, and, without stiffness, kept steady, or they destroy the hand. The wrist must be rounded a little outwards. The hands must be about three inches from the body, and from the pommel of the saddle, and from four to six inches apart; the thumbs and knuckles pointing towards each other, and the finger-nails towards the body.*

* When in motion round the manège or the circle, the inward hand, or that toward which we turn, is to be a little lower than the outward one.

When the rider is in the proper position on horseback without stirrups, his nose, breast, knee, and instep are nearly in a line ; and, with stirrups, his nose, breast, knee, and toe, are in a line.—(Plate XXXV.)

The man and the horse throughout are to be of a piece. When the horse is at liberty, or disunited, as it is termed, the rider sits at his ease ; and, as he collects and unites his horse, so he collects and unites himself. There must, however, be no stiffness of manner, more than in sitting on a chair at home ; for it is ease and elegance which distinguish the gentleman.

THE BALANCE.

The balance in riding preserves the body from that inclination to one side or the other which even the ordinary paces of the horse, in the trot or gallop, would otherwise occasion. It accompanies and corresponds with every motion of the animal, without any employment of strength, consequently, the rider sits so firmly that nothing can move his seat.

To illustrate this we may add, that, if the horse work straight and upright on his legs, the body must be in the same upright direction ; as the horse moves into a trot, the body must be inclined a little more back ; in the gallop, also in leaping, or in any violent movements of the horse, the body must chiefly be kept back ; and, when the horse bends and leans, as he does when on a circle, or trotting briskly round a corner, the body must lean similarly, or the balance will be lost.

Throughout the whole, the figuro must be pliant to every

action of the horse; for the balance can be maintained only by as many different positions as the horse is capable of working in.

To help his balance, the rider must never take the slightest assistance from the reins. Whatever the position of the body, the hand must be fixed, and the reins of such a length as to feel and support the horse, but never to hold on.

To acquire the balance, the practice on circles, or the longe, is useful; working equally to both hands, and not using stirrups till the pupil has acquired the balance without them.

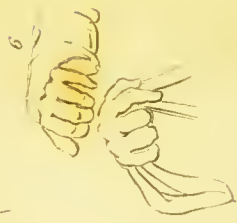
Experience proves that the body, if in the manège seat and fundamental position, almost involuntarily takes the corresponding motion, whether the horse stumbles, rears, springs forward, or kicks.

THE REIN-HOLD.

There are various methods of holding the reins, according to the style of riding, the design of the rider, and the propensities of horses.

In holding the SNAFFLE-REINS separately, one rein passes into each hand, between the third and fourth fingers, and out of it over the fourth finger, where it is held down by the thumb.—(Plate XXXVI. Figure 1.)

When afterwards further advanced, the reins are held in the left hand, as at first taken up; the left rein passing under the little finger, and the right under the third finger, both lying smooth through the hand, the superfluous rein





How to hold a pen





hanging over the first joint of the forefinger, and the thumb being placed upon it.* — (Plate XXXVI. Figure 2.)

Riders should not throw their right shoulders back, as they are apt to do, when they first take the reins in one hand. The right arm should hang by the side, with the hand by the side of the thigh; or, if holding the whip, it may be kept a little lower than the left, in order not to obstruct the operation of the bridle.

We have already said, that we think it best to ride with the snaffle alone, and to use the curb only occasionally. In this case, the curb reins may have a slide upon them, and may hang on the pommel of the saddle, or the horse's neck.

When the rider, however, holds the curb as well as the snaffle, having both, as is most usual, in the left hand,—while the curb reins are placed as above described of the snaffle reins, the snaffle reins are placed within them; that is, the left snaffle rein enters under the second, and the right under the first finger, and both pass up through the hand, and out of it, over the forefinger, precisely as do the curb reins, except that they lie at first above, then within, and lastly under them.—(Plate XXXVI. Fig. 4.)

SHIFTING the reins should be done expertly, without

* Sometimes, however, the right rein is made to enter the hand from above over the forefinger, and crosses the left rein in the palm, where the fingers close upon them, a loop or bow being formed of the residue between the hand and body, whence it hangs down.—(Plate XXXVI. Figure 3.)

stopping the horse, altering the pace, breaking the time, or looking to the hands.

When the snaffle reins are held in one hand, the method of shifting from the left hand is as follows :

Turn the thumbs towards each other ; carry the right hand over the left ; in place of the little finger of the left hand, put the forefinger of the right hand downwards between the reins ; lay the reins smoothly down through the right hand, and place the thumb upon the left rein between the first and second joint of the forefinger.—(Plate XXXVI. Figure 5.)

To shift them again into the left hand, it is only necessary to carry the left hand over the right ; to put the little finger of the left hand downward between the right and left reins ; to place them smoothly upward through the hand, and to let the ends hang over the forefinger, as at first.—(Plate XXXVI. Figure 6.)

When both curb and snaffle reins are held in the usual method, we shift them into the right hand in a similar manner, by turning the thumbs toward each other ; carrying the right hand over the left ; putting the forefinger of the right hand into the place of the little finger of the left ; the second finger of the right into the place of the third finger of the left ; and the third finger of the right into the place of the second finger of the left ; and laying the reins smoothly down through the right hand.—(Plate XXXVI. Figure 7.)

When we shift the reins again to the left hand, we put the fingers of the left hand into the places we took them

from, and turn the reins smoothly upward through the hand and over the forefinger.—(Plate XXXVI. Fig. 8.)

SEPARATING the reins is sometimes necessary. When a horse refuses obedience to one hand, we use two. It is seldom, however, necessary to take more than one rein in the right hand; and this is the right rein of the snaffle only.

For this purpose, the rider turns the back of his right hand upwards, puts the first three fingers over the snaffle rein, receives it between his little and third fingers, lets the superfluous end hang over the forefinger, with the thumb upwards, as he does the bridle hand.—(Plate XXXVI. Figure 9.)

ADJUSTING the reins, is shortening or lengthening them, wholly or partially, as occasion may require.

To adjust the whole, we take the superfluous reins that hang over the forefinger of the left hand into the right hand, so that with that hand we support the horse, and feel every step he takes, and we then open the fingers of the left hand so as to slip the hand up and down the reins smoothly and freely, and thereby adjust them to our pleasure.

To shorten the curb rein, and lengthen the snaffle, we take in the right hand the centre of the curb rein, that hangs over the forefinger, slip the whole of the reins too long, pass the left hand down the reins, and feel with the fingers whether both the curb reins are of equal length, before we grasp with the left hand, or quit with the right.

Similarly, we shorten the snaffle, and lengthen the curb, by taking in the right hand the centre of the snaffle that

hangs over the forefinger, and proceeding in the same way.

When any single rein wants shortening, we apply the right hand to that part which hangs over the forefinger, and draw it tighter.

When the reins are separate, or occupy both hands, and want adjusting, we bring the hands together to assist each other; remembering that the inner hand, or that which supports the attitude the horse works in, is not to depart from its situation, so as to occasion any disorder, but that the outer hand is to be brought to the inner, for the purpose of adjusting them.

THE CORRESPONDENCE.

To have a correct notion of the manner in which the hand operates on the horse's mouth, it must be understood that the reins, being held as described, are collected to such definite length, that bracing the muscles of the hand would rein the horse back, and easing them permit the horse freely to advance; the hand, for preserving a medium effect on the mouth, being only half shut, and the knuckles next the wrist being nearly open.

The hand, then, being connected to the reins, the reins to the bit, the bit operating in the curb on the bars, and in the snaffle on the lips, the rider cannot move the hand, and scarcely even a finger, without the horse's mouth being more or less affected.—This is called the CORRESPONDENCE.

If, moreover, the hand be held steady, as the horse advances in the trot, the fingers will feel, by the contraction

of the reins, a slight tug, occasioned by the cadence of every step ; and this tug, by means of the correspondence, is reciprocally felt in the horse's mouth.—This is called the APPUY.

While this relation is preserved between the hand and mouth, the horse is in perfect obedience to the rider, and the hand directs him, in any position or action, with such ease, that the horse seems to work by the will of the rider, rather than by the power of his hand.—This is called the SUPPORT.

Now, the correspondence or effective communication between the hand and mouth,—the appuy, or strength of the operation in the mouth,—the support, or aid, the hand gives in the position or action,—are always maintained in the manège and all united paces. Without these, a horse is under no immediate control, as in the extended gallop or at full speed, where it may require a hundred yards to pull before we can stop.

THE ACTION.

The degree of correspondence, appuy, and support, depends, in horses otherwise similar, on the relative situation of the hand.

The raising of the rider's hand increases his power ; and this, raising the horse's head, diminishes his power. The depressing of the rider's hand, on the contrary, diminishes his power ; and this, depressing the horse's head, increases his power.

On these depend the UNITEDNESS OR DISUNITEDNESS in the action of the horse.

A writer on this subject (Berenger, we believe) gives the following useful illustration.

If a garter were placed across the pupil's forehead, and a person behind him held the two ends in a horizontal direction, the pupil, if he stood quite upright, could not pull at the person's hand, nor endure the person's hand to pull at him, without falling or running backwards.—*This is the situation of a horse when united.*

Accordingly, when the pupil felt the hand severe, or expected it to pull, he would guard against it by bending the body, projecting the head, and planting one foot behind.—*This is the situation of a horse when disunited*, or defending himself against the heaviness of the hand.

Hence the perpetual pull of a timid rider, or a heavy insensible hand, cannot keep a horse united, because the horse cannot then bear its severity. Hence heavy hands make hard-mouthed horses. And hence it is in this condition that we generally find horses; for the best broke become so, if rode a few times by an ignorant horseman. In such cases, the horse makes the rider support the weight both of his head and neck, or is on his shoulders, and is apt to stumble.

If, then, the appuy be heavy, from the head being carried too low, and the horse not sufficiently united; the rider must raise the hand, and let the fingers, by moving, rather invite than compel the head, or more properly the neck, to rise, for the object is to bring in the head by raising the neck; the legs at the same time pressing the haunches under. By this means, the horse will be united, and the appuy will be lightened.

Should the hand, however, be too confining to the horse when united, he may become so balanced on his haunches, that he can neither disunite himself, nor advance one step; and, should the rider then press him without yielding or dropping the hand, he would compel him to rear.

Such are the two extremes, where the horse is disunited, and where he is too much united. The intermediate effect of the hand and heel must be acquired by practice.

THE HAND.

To a masterly hand, firmness, gentleness, and lightness, are very properly described as being essentially necessary.

FIRMNESS of the hand does not, however, do more than correspond exactly with the feeling in the horse's mouth, unless the horse attempts to get the ascendancy, to abandon that delicate correspondence producing the appuy and keeping him under the strictest obedience, and to make a dull or insensible pull on the hand.

To frustrate these attempts, the hand is kept firm, and the fingers braced; and, should the horse plant his head low to endure this, the fingers are moved, the reins shaken, &c. to raise the head and divert him from his purpose; or, if this be unavailing, the hand is yielded that the reins may become slack, and a snatch is given in an upward direction, which will not only make him raise his head, but will deter him from putting it down again.

GENTLENESS of the hand relaxes a little of its firmness, and mitigates the feeling between the hand and the horse's mouth, without passing, however, from one extreme to another.

LIGHTNESS of the hand lessens still more the feeling between the rider's hand and the horse's mouth, and consists in a slight alternate feeling and easing of the bridle, regulated by the motion of the horse; for, if the appuy were always in the same degree, it would heat the mouth, dull the feeling, and render the horse's bars callous.

The rider must also distinguish whether the horse wishes to disengage himself from restriction, or wants a momentary liberty, to cough, to move if cramped, to dislodge a fly, &c.

The curb, if used, requires always a light hand to manage it; and the horse should never be put to do any thing in a curb at which he is not perfectly ready. The curb is adapted for acting in a direct line: the snaffle should be used in all other cases.

Still, as to all these qualities, the TRANSITIONS must be gradual.

Were the rider, passing over that degree of restraint which is derived from the easy or gentle hand, to go at once from a firm hand to a slack one, he would deprive his horse of the support he trusted to, and precipitate him on his shoulders.

On the contrary, were he to pass from the slack to the tight rein all at once, he would give a violent shock to the horse's mouth.

All the operations of the hand, then, should be firm, gentle, and light; and, in these, the fingers and wrist alone must act.

Certain liberties called DESCENTS of the hand, are also taken with well-bred horses.

These are made three different ways:—by advancing the

arm a little but not the shoulder, still keeping the usual length of rein, or by dropping the knuckles directly and at once upon the horse's neck;—by taking the reins in the right hand, about four fingers' breadth above the left, and letting them slide through the left, dropping the right hand at the same time upon the horse's neck;—and by taking the end of the reins in the right hand, quitting them entirely with the left, and letting the end of them fall upon the horse's neck.

These graceful freedoms must never be used but with great caution, when the horse is quite together, and in the hand; and the rider, by throwing back his body, must counterbalance the weight of the horse upon its haunches.

There are still minuter rules belonging to this head.

Both snaffle reins being in one hand, and that in the first position,—if we open the first and second fingers, we slacken the right rein;—if we open the little finger, we slacken the left rein;—if we shut the hand entirely, and immediately open it again, we lessen the tension of both reins. By these methods, we may relieve and freshen the two bars in which the feeling and appuy resides.

So also in the second descent of the hand. While the right hand holds the reins, we may slide the left hand up and down these in that degree of appuy which belongs to the easy and slack hand; during which the horse will endeavour to preserve that mutual sensation between the mouth and the hand, which makes him submit with pleasure to constraint.

By this play of the rein and movement of the bit to avoid pressure in one continued way, the horse's head is kept high, and his neck and crest are raised.

THE GUIDANCE OR AIDS.

The modes of guiding the horse are called aids, because they not only direct, but assist the horse to execute. They also check him in acting contrarily.

These aids are certain positions of the hand, body, legs, and sometimes of the switch or whip.

The hand is so far the principal of these, that the others are sometimes called accompaniments, as only giving power and efficacy to the hand.

Aids of the Hand.

A horse can move four different ways—forward, to the right, to the left, and backward: but he cannot perform these motions, unless the hand of the rider makes four corresponding motions.

There are accordingly five different positions for the hand, including that general one from which the other four proceed.

The five Positions when one Rein is held in each Hand.

In the *first position*, the reins pass up between the third and fourth fingers of each hand, their ends are thrown over the forefingers, the thumbs are closed on them, and the fingers are shut;—the hands being held, as already described in treating of the seat.

The *second position* consists of a slight relaxation of the preceding, and permits the horse to *advance*.

The *third position* shortens the right rein rather upward, and turns the horse to the *right*.

The *fourth position* shortens the left rein rather upward, and turns the horse to the *left*.

The *fifth position* shortens both reins, and stops or reins the horse *backwards*.

The five Positions when the Reins are held in one Hand.

The aids of the hand, as forming these positions, when the reins are held in one hand, may be very simply given by a little extending, or bending the wrist, to make the horse advance, or go backward,—and by slightly carrying the hand to the right, or to the left, and in both cases rather upward, to make the horse turn in these directions.*

These aids, however, where the reins are held in one hand, are not so effective as those where the reins are separate.

* THE TWISTINGS OF THE BRIDLE HAND.

Here several modifications of the rules already given occur.

We do not, however, approve of these positions, as they, in a great measure, reverse and destroy the natural aids of the hand, by leaving the right rein slack in the turn to the right, the left rein slack in the turn to the left, &c. Indeed, they could not possibly be obeyed by the horse, were it not that, on this point, he seems to have more understanding than his rider, and draws his conclusions as to the latter's intentions, not from the inconsistent action of his hand, but from the more natural accompanying aids of his body and legs.

Aids of the Body.

To aid the second position of the hand, and cause the horse to *advance*, the body may be thrown a little forward, but not so as to press heavily on the horse's foreparts.

To aid the third and fourth positions of the hand, a mere turn of the body is sufficient.—Thus, in entering an angle, it is only necessary to turn the body imperceptibly toward the corner, just as if the rider intended to go into it himself; his body then turning to the right or left, his hand must necessarily turn likewise, and the leg of the side on which he turns will infallibly press against the horse and aid him. In coming out of a corner, it is only necessary to turn the body again, the hand will follow it, and the other leg approaching the horse, will put his croupe into

Fortunately, however, these twistings of the bridle hand, though always taught, are, we believe, rarely practised; but *we think it very discreditable to writers on horsemanship, that, till this moment, these positions should have stood without their error being pointed out by any one!*

We give these positions here, only in compliance with custom.

In the *first position*, the under surface of the forearm and hand forms a horizontal line from the elbow to the joint of the little finger; the elbow is lightly closed to the hips; the wrist is rounded; the knuckles are kept directly above the neck of the horse, the hand being at three inches from the body and as much from the pommel of the saddle; the nails are turned towards the body, the little finger being nearer to it than the others; the reins, in entering the hand, are separated by the little finger; and the thumb is placed flat upon them as they pass out over the forefinger.

In the *second position*, the hand is yielded to the horse by turning the nails downwards, so as to carry the thumb nearer the body, and

the corner, in such a manner that it will follow the shoulders, and be upon the same line.—The same motion of the body is likewise necessary to turn entirely to the *right* or *left*.

To aid the fifth position of the hand, and make the horse go *backward*, the body must be thrown gently back, and the hand will go with it.

Aids of the Legs.

To aid the second position of the hand, and make the horse *advance*, the legs must be closed.—Even when a horse stands still, the legs held near him will keep him on the watch, and with the slightest upward motion of the

the little finger further from it, yet somewhat obliquely, for the thumb passes nearly into the place where the knuckles were in the first position, the nails being now directly above the horse's neck. This permits the horse to *advance*.

In the *third position*, the hand, leaving the first, is turned upside down, so that the thumb is carried out to the left, and the little finger brought in to the right. This carries the operation of the reins nearly three inches more to the right, by which the left reins press the neck, the right reins are slack, and the horse is turned to the *right*.

In the *fourth position*, the hand leaving the first, the back is turned upward, so that the little finger is carried out to the left, and the thumb brought in to the right. This carries the operation of the reins to the left, by which the right reins press the neck, the left reins are slack, and the horse is turned to the *left*.

In the *fifth position*, quitting the first, the wrist is rounded, the nails turned upwards, and the knuckles towards the horse's neck. This stops the horse, or compels him to go *backward*.

bridle, he will raise his head and show his forehead to advantage.

To aid the third position of the hand, and turn to the *right*, the right leg must determine the croupe to the left, and facilitate the action of the shoulder, which the hand had turned to the right.

To aid the fourth position of the hand, and turn to the *left*, the left leg must determine the croupe to the right.

In making a change to the right, the left leg confines the croupe, so that it must follow the shoulders. In changing again to the left, the right leg acts similarly.

To aid the fifth position of the hand, and *stop* the horse, while he is held in, the legs must be gently brought to the sides.

The aids of the legs have their *degrees* progressively increasing, thus:—the leg being brought nearer the side, is the lightest; placing the leg further back, with the toe turned out, is the next; a touch with the calf of the legs, is the third; a stroke with it, having the toe kept up firmly, that the muscles of the leg may be hard, is the fourth; and the strongest is the scratch, which, when the legs are laid on hard without effect, is given by dropping the toe, when, if the spur is properly placed, the rowel will scratch the horse's side, and this is succeeded by giving the spur sharply.

Aids with the whip are sometimes used to give greater effect to the heel. These are gentle taps with the whip on the hind quarters, and sometimes on the shoulders.—When given on the near side, the hand is either applied behind

the back, with the whip held by the fingers like a pen, the lash being downwards, or across the bridleband before, the whip being held with the lash upwards.

ANIMATIONS, SOOTHINGS, AND CORRECTIONS.

ANIMATIONS proceed from the hand, the leg, the whip, or the tongue.

Those of the hand and of the legs have been described among the aids.

Animations of the whip are mild taps to quicken the horse, or, if the lash is upwards, switching it in the air.

The animations of both legs and whip threaten punishment; and accordingly, with sluggish horses, both spurs and whip may be necessary.

The animation of the tongue is produced by placing the tongue flat against the roof of the mouth, and suddenly displacing the posterior part of it by drawing the air laterally between it and the palate. This noise is animating to the horse; but, if too much continued, or too frequent, its effect is destroyed.

SOOTHINGS are the reverse of animations, and are used to dispel the fears of horses, and to give them confidence.

The voice soothes by soft and mild tones; the hand, by gentle patting, or stroking; the body and legs, by relinquishing all unnecessary firmness, and sitting easy.

A horseman should have perfect command of his temper as well as invincible patience and perseverance, to make the horse comprehend and perform. He must demand but little the first time; he will be more readily obeyed the

next time ; and he may increase his demands as the horse improves in habit and temper.

CORRECTIONS are given either with the spurs or switch, or by keeping the horse in a greater degree of subjection.

In all corrections, a good horseman endeavours rather to work upon the mind than the body of the horse.—The corrections which render a horse most obedient, and yet dishearten him least, are not severe, but rather oppose him by restraint, and make him do directly the contrary.

If a horse do not go off readily, or if he be sluggish, make him go sidwise, sometimes to one hand, sometimes the other, then drive him forward.—If he go forward too fast, moderate the aids, and make him go backward more or less according to his conduct.—If he be disorderly and turbulent, walk him straightforward, with head in and croupe out.

When correction is given with the whip, it should be with strength ; the lash being upwards, the arm lifted high, and the whip applied behind the girths round the belly ; or it may be given forward, over the shoulders, between the fore legs.—Should the horse kick at the application of the whip to his flank or quarter, the rider must instantly apply it smartly, and must repeat it more sharply, should he kick at that. By this, the horse may be made sensible of his fault.

To give a horse both spurs properly, the rider must change the posture of his legs, and, bending his knee, strike him with them at once, quickly and firmly.

Some horses disregard the whip, but fly at the spurs ;





others disregard the spurs, and are terrified at the whip; the rider consequently will apply that which is most likely to produce the desired effect.

When, however, the whip or spurs are applied two or three times sharply to restive horses without effect, the rider must desist, and try other methods.

THE WALK.

The Walk in general.

The rider should not suffer the horse to move till his clothes are adjusted, and whip shifted, when, collecting his reins, and taking one in his right hand, he must close his legs; to induce the horse to move slowly forward in the walk. If we wish to increase the pace, the pressure of the knees must be increased.

When the horse moves, the legs must resume their former position,—the hands remain perfectly steady,—and the body yield to the movement of the horse.

As to CHARACTER, the walk is the pace performed with the least exertion; only one leg at a time being off the ground, and three on.

In this pace, accordingly, four distinct beats are marked, as each foot comes to the ground in the following order: first the off fore foot, next the near hind foot, then the near fore foot, and lastly, the off hind foot.*

* The amble may perhaps be considered as a natural pace of the horse, as most foals, following their dams, amble more or less to keep up with them. The difference between the walk and the amble is, that two legs of a side are raised in the latter at the same instant.

The PERFECTION of the walk consists in its being an animated quick step, measuring exact distances, and marking a regular time, by putting the feet flat to the ground.

Its excellence depends on that uniting of the horse which supports his head and raises his feet, without shortening or retarding the step; and that animation which quickens the step and sharpens the beats without altering the time or the action.

IN PERFORMANCE, if the rider do not support the horse sufficiently, his head will be low, and his walk slovenly: if he support him too much, he will shorten his step so that he cannot walk freely. If the rider do not animate him, he will not exert himself: if he animate him too much, he will trot.

If the horse trot when the rider designs him to walk, he will find either his hand or the degree of animation communicated by the whip, tongue, legs, or bracing of the body too high, and this he must instantly modify, as well as check the horse.

(Plate XXXVII. illustrates the Walk.)

Turns in the Walk.

Turns in general should be made slowly; and all the aids should combine in producing them.

IN PERFORMANCE, the hand to which we turn, or inner hand, is to be a little below the outer one, and the inner rein is to be held with double the force of the outer one, which is to be exerted by the little finger pulling gently upwards and towards the body, while the outer hand retains a steady hold of the outer rein.

At the same time, the legs, by a slight pressure with the calves, must support the horse, keep him up to the bridle, make him bring his haunches under him, and obey the leading rein. The pressure of the inward leg alone would make the horse throw his haunches too much outwards.

All this is to be done in proportion to the effect meant to be produced; and great precision and delicacy are required in the execution.

WHEELS may also be briefly noticed here.

A horse may wheel or turn on his own ground, on three pivots,—on his centre, on his fore feet, and on his hind feet. In all these, the hand directs all before the horseman, and the heel all behind him.

In wheeling on centres, the hand and heel operate together—the hand leading the shoulder round—the leg directing the croupe, by which means, in going about, the fore feet describe one half circle, and the hind feet another.

Here the aids of the hand, body, and legs, must exactly correspond; and the degree of appuy must be merely such as will carry its aids into effect; for, if the appuy is too weak, the horse will advance over his ground, and if too strong, he will retire from it.

On terminating the wheel or quarter circle, the about or half circle, or the about and about, or whole circle, the hand, the body, and leg, must instantly resume their proper position.

The wheel on the fore, and that on the hind feet, are still more rarely of use in common practice.

Stops in the Walk.

Horses and horsemen generally stop by a gradual cessation of action, in a time and distance which depend on circumstances.

As to CHARACTER, however, the stop, when properly performed, is an instant cessation of advance, without any previous indication.

When the stop is properly performed, it shews the great superiority of the rider's hand over the horse. It consequently confirms him in obedience, unites him, supple the haunches, and bends the houghs. Much ill, however, may occur from a too frequent or injudicious practice of it.

The PERFECTION of the stop consists in the action ceasing at the finish of a cadence, without breaking the previous time; and in the horse being so balanced on his haunches, and so animated, that, with liberty given, he can advance with the same rapidity as before.

IN PERFORMANCE, the time to be seized is when the first part of the cadence is coming to the ground; so that its finish completes the stop. If this is not done, the cadence will be broken, and the stop rendered irregular.

Such being the time, the stop is performed by the rider, bracing his arms to his body, holding both reins equally and firmly, drawing the fingers toward the body, closing for an instant both legs, to press the horse up to the bridle, and throwing the body back, with precisely such strength of all the muscles as is proportioned to the effect; all this being done at the same instant, and making but one motion.

If the rider do not close his legs, the horse may not

bring his haunches under, the stop will be on the shoulders, and its effect will be destroyed.

If, in stopping, a horse toss up his nose, or force the hand, the bridle hand must be kept low and firm, no liberty must be given, his neck must be pressed with the right hand till he has brought down his nose, and immediately all his bridle may be given him.

(Plate XXXVIII. illustrates the Stop.)

If the horse has not readily obeyed in making the stop, he should be made to go backwards, as a proper punishment for the fault.

Going Backward in the Walk.

The action of a horse when he goes backwards, is to bend his haunches, to have always one of his hinder legs under his belly, on which to rest and balance himself, and to push his croupe backward.

IN PERFORMANCE, the horse's head must be steady and right, his body must be gathered up under him, he must be upon his haunches, and his feet must be even.

To aid him in this, there must be an equal and steady feeling of both reins; the hand must be held centrally, and kept from rising, with the knuckles a little down, inviting the horse to back; the body must be bent a little forward, with the belly drawn in; and the legs must gently press the sides of the horse, in order to keep him up to the bridle, and to prevent him from swerving.

The instant the horse yields to the band, the body and

hand yield to the horse, that he may recover his balance ; and he may then be pressed to back again.

If either the deviation of the hand from its central situation, or any other cause, make *the croupe go off the line in an opposite direction*, the heel must support and direct him. Thus, should the croupe traverse to the right, the right leg must direct ; and, to assist, the hand must be carried a little to the right ; but this must be done with delicacy, lest we throw the croupe too much to the left.

Here the hand and the heel change their functions : the hand compels the action, and the heel directs it.

THE TROT.

The Trot in general.

As to the CHARACTER of the trot, when we urge the horse to proceed faster than he can by moving one leg after the other in the walk, we oblige him to take up two at a time in the trot.

Here the off fore foot and the near hind foot give one beat ; and the near fore foot and the off hind foot give another ; so that there are two legs crosswise off the ground, and two legs on ; the beats being sharp and quick, in proportion to the degree of animation and extension.

The PERFECTION of the trot consists in its suppleness, giving the horse a free use of his limbs ; in its union, distributing his labour more equally, the horse's fore legs having more to sustain than the hind, especially when he is disunited, or on the shoulders ; and in its action, which should be true and equal, the liberty of the fore quarters





not exceeding the hind, nor the hind the fore—the knee being up, the haunches bent, springy and pliant, the step measuring exact distances, and marking a regular time.

In the trot, there is a LEADING FOOT, either right or left, by which the corresponding side is a little more advanced than the other.

This leading with either foot is valuable, as, in horses that have not been thus supplied, if chance or fatigue make them change their leg for that which they are not accustomed to, the action is stiff, confined, and irregular.

Kinds of Trot.

There are three kinds of trot—the extended, the supple, and the even.

In the EXTENDED TROT, the horse steps out without retaining himself, being quite straight, and going directly forwards.

In the SUPPLE TROT, the horse, at every motion, bends and plays the joints of his shoulders, knees, and feet.

In the EVEN TROT, the horse makes all his limbs and joints move so equally and exactly, that his limbs never cover more ground one than the other, nor at one time more than at another.

These three kinds of trot depend upon each other. We cannot pass a horse to the supple trot without having first worked him to the extended trot; and we can never arrive at the even and equal trot, without having practised the supple.

To pass from the extended to the supple trot, the horse must be gently and by degrees held in.

When, by exercise, he has attained sufficient suppleness to manage his limbs readily, he must insensibly be held in more and more, till he is led to the equal trot.

The Trot in particular.

IN PERFORMANCE, the rider must apply, for an instant, both legs to his sides ; and at the same time raise the fore hand by drawing the little finger on each side rather upwards and towards the body, avoiding all jerks or sudden motions.

During the trot, the rider must sit close to the saddle, preserving his seat by the balance of the body, and not by the pressure of the knees ; he must neither rise nor stand in the stirrups ; his body must incline a little backwards ; the whole figure must partake of and accompany the movements of the horse ; and he must keep the hands up in their proper situation, steady and pliant, preserving a due correspondence, and just appuy.

If the action is too rapid, it must be checked by strengthening the hand.

If the action be too slow, it may be quickened by easing the fingers, and giving more animation.

To give more animation, and encourage the horse to put his foot out freely, the rider must support his fore hand up, and his haunches under, by a touch of the fingers, the excitement of the tongue, the switch of the whip, or the application of the legs, varied so as not to lose their effect.

If the action be not sufficiently united, that also must be corrected.

To unite the horse, the reins must be collected, and the head raised. By at the same time bringing his haunches under him, he may be pressed up to the bridle by the aid of the legs; care being taken that this is not done hastily or violently. He must not, however, be confined in the hand, in expectation of raising him, and fixing his head in a proper place, as by this means his bars and mouth would very soon grow callous.

The most certain sign of a horse's trotting well, is, that when, in his trot, the rider presses him a little, he offers to gallop.

If the horse gallop when he should not, the waist should be pushed forwards toward the pommel of the saddle, and a bend or hollow should at the same time be made in the loins.

Turns, Stops, etc. in the Trot.

As to TURNS, seeing that the operations directed to be performed at the walk are to be practised in the trot, nothing further need be said of them.

As STOPS are required to coincide with cadences, it must be observed, that the first part of the cadence in the trot is performed by the two feet that lead; and that the conclusion of the cadence is performed by the two feet that follow, and this should complete the stop.

The rider should occasionally alter the measure of the action, by strengthening the hand, and at the same time keeping up a sufficient degree of animation to prevent the horse from stopping. He may then give him liberty, and proceed with the same spirit as before.

He may make a stop ; and may even rein him back two or three steps ; in both cases keeping the horse so united and animated that the instant the hand gives him liberty he advances as rapidly as before.

(Plate XXXIX. illustrates the Trot.)

ROAD RIDING.

Road riding is here introduced, because the trot is its most appropriate pace.

The difference between manège and road riding, consists chiefly in a shorter seat and a shorter stirrup being used in the latter.

A certain freedom and ease are also admissible. These, however, must not exceed propriety, neglect the horse, or risk security.

The hand must keep its situation and property, though the body be turned to any extreme for the purpose of viewing or conversing ; and the body must not, by any freedom it takes, throw itself out of balance, or take liberty when it cannot be done with safety.

When the trot is extended to an unpleasant roughness it is admissible to ease the jolting by *rising upward and slightly forward in the stirrups.*

The faster the horse trots, the easier it is to rise ; for it is the action of the horse, and not any effort of the rider that must raise him.

The foot the horse leads with determines the one the rider must rise to ; and, if the horse change his foot, he must change with him. He must accordingly rise and fa



Good Riding



with the leading foot, rising when the leading foot is in the air, and falling when it comes to the ground.

The rise and fall of the body are to be smooth, and as regular as the beats of the feet.

Though this is called rising in the stirrups, no great stress or dependence is to be put on them. Such improper use of the stirrups causes many persons to be thrown, by the horse shying or suddenly turning round.

The rising of the body must not be accompanied by any motion of the arms, or lifting of the shoulders.

The hand must be held steady as well as low, to prevent galloping (which the forwardness of the haunches would render inevitable if the hand were either eased or lifted), and the reins of that precise length which preserves as much correspondence as possible between the hand and mouth. The steadiness of the hand is also necessary for the support of the horse.

The slight inclination of the body must not occasion any roundness in the back, which is invariably to be hollow, not only for seemliness, but for safety.

The action of the body likewise must not cause the legs to move or press the horse, which might cause him to gallop.

In trotting, the rider must pay the greatest attention to correct every propensity to lift, hitch, over-rate, or gallop; and, whenever he feels these propensities, he must check them with the greatest nicety, in order not to retard the horse's speed.

(Plate XL. illustrates the Seat, &c. in road riding.*)

* In road riding, the rule of taking the right hand of all you pass

THE GALLOP.

The Gallop in general, and its Kinds.

As to the CHARACTER of the gallop, when we press a horse in the trot beyond his capacity, or animate him with the legs while we raise or retain him with the hand, we compel him to lift his two fore feet after each other, which commences the gallop.

Here, the near fore foot is first raised from the ground; then the off fore foot, which however passes the other, and they come to the ground in the same order, the near fore foot making one beat, and the off fore foot another, that being the most advanced or leading foot. The hind feet follow in the same manner; the near hind foot marking a third beat, and the off hind foot passing forward, and marking a fourth beat. Thus, when this pace is united and true, the feet mark a regular, sharp, and quick time of one, two, three, four.

is well knowu ; but there are some exceptions, which are noticed by Mr. Buubury, as follows, in his ironical style :

“ In riding the road, should a man on horseback be on the road, and leading another horse, always dash by the led one; you might otherwise set the man's horse capering, and perhaps throw him off; and you can get but a kick or two by observing my instructions.—In passing a waggon, or any tremendous equipage, should it run pretty near a bank, and there be but a ditch, and an open country on the other side, if you are ou business, and in a hurry, dash up the bank without hesitation; for, should you take the other side, and the horse shy at the carriage, you may be carried many hundred yards out of your road; whereas, by a little effort of courage, you need only graze the wheel, fly up the bank, and, by slipping or tumbling down into the road again, go little or nothing out of your way.”

The PERFECTION of the gallop consists in the suppleness of the limbs, the union of the horse, the justness of the action, and the regularity of the time.

The gallop is of THREE KINDS—that of the racer, that of the hunter, and that of the pleasure horse, commonly called the canter. The last of these is by far the most difficult, as it requires skill to foreshorten and throw the horse on his haunches.

In the gallop, as in the trot, there is a LEADING FOOT.

In galloping on a straight line, it is immaterial with which fore leg the horse leads, provided the hind leg of the same side follows the fore leg. But to lead always with the same leg is injurious.

In galloping to the right, the horse must lead with the inward or off fore leg, followed by the off hind leg. This action is termed true or united.—(Plate XLI.* shews this in the Canter.)

In galloping to the left, the horse must lead with the inward or near fore leg, followed by the near hind leg. This also is termed true or united.†

* In galloping to the right, if the horse lead with the off fore leg and near hind leg, or if he lead with the near fore leg and off hind leg, he is said to be disunited.

If, in galloping to the right, he lead with both near legs, he is said to be false.

† In galloping to the left, if the horse lead with the near fore leg and off hind leg, or if he lead with the off fore leg and near hind leg, he is said to be disunited.

If, in galloping to the left, he lead with both off legs, he is said to be false.

The Canter in particular.

As to PERFORMANCE, to put the horse to the canter from rest at any spot, or from any pace, he must be pressed with the legs, or animated with the tongue, and at the same time, by a motion of the fingers, and a little raising of the hand, he must be invited to raise the fore legs.

If he do not obey this, the animation must be increased, and the hand kept more firm, to prevent his trotting ; and this will constrain him to raise his fore legs together.

It is also necessary to direct the foot he is to lead with. That of course is the inner, which he will readily take by putting the croupe in, by means of the opposite thigh, thereby enabling him to advance the inner side.

As the position of the horse renders necessary a corresponding position of the horseman, it will readily be seen that whichever side the horse leads with, the rider's thigh on that side must be rather more turned in towards the saddle, and the hip on that side more brought forward, and consequently that the other thigh must be a little turned outward, and the hip brought backward ; and all this more or less in proportion to the position of the horse.— This is the foundation of the aid we have just described.

This turn of the hip effects a turn of the body. The hands are carried with the body, and at the same time kept up, rather above than below the elbow, and quite steady, that the cadence of every step, and the support given by the hand, may be felt.

The rider's head is of course to be directed to the horse's



The center



nose, his eye glancing on the ground the horse's fore feet go over.

If the horse strike off with the wrong leg, false or disunited, the rider, at the first corner, must endeavour, by an additional feeling of the inward rein, and application of the outward leg, to make him change, and lead with the proper leg.

When the horse leads with the proper leg, the hand must resume its usual position, the rider bending the horse a little inwards by shortening the inward rein; and the fingers must be softened, if necessary, to let the horse advance; but the hand must be kept up, and every cadence felt of the fore feet coming to the ground.

There is far more skill displayed in keeping up an animated action in the canter, at the rate of three miles an hour, than in the gallop, at that of twelve or fifteen.

If the animation fail, or the action be not supported by the hand, the horse will break into the trot, particularly as the gallop is shortened or united.

If the action is felt to be declining, it must be corrected instantly, by an animating touch of the fingers, the leg, or the tongue. The hand first discovers this declension, and is the first to correct it.

When the rider can put his horse off to either hand with the proper leg, and support the action, he must particularly attend to its truth and union, and try to raise it to the highest animation, riding sometimes rapidly, sometimes slowly, yet always united.

When the gallop is disunited and extended to speed, even though the horse is supple and just on his legs, it loses its harmony and regularity of time. The fore legs then measure less space from each other, and so do the hind legs, which makes the beats quicker in each, and leaves a space between the beats of the fore legs and the beats of the hind.

In these gallops, it would be highly imprudent to circle or turn, but on a very large scale.

Turns, Changes, Stops, etc. in the Gallop.

In TURNING the horse to the right and left, at a canter, the horse's fore hand must be raised with the leading rein, and the haunches pressed forward and under him: at the same time, the outward rein must assist to steady the horse, and a pressure of the calf of the outward leg must keep the haunches from falling too much out.

If the horse is turned suddenly with the inward rein only, without lifting the fore hand, or applying the outward leg, the horse must turn on his shoulders, lose power to halt on his haunches, and being twisted round unprepared, will change to the outer leg.

In CHANGING, the operation must be performed smoothly and evenly at the same instant; so that, at the finish of the cadence, the body, hands, thighs, and legs of the rider are reversed, for the horse to commence his next cadence with the contrary leg.

In STOPPING in the gallop, the rider must seize the time when the horse's fore feet are coming to the ground, which is the beginning of the cadence; and he must take care

that the hind feet coming up to their exact distance, and finishing the cadence, complete the stop ; leaving the horse so balanced that he can readily set off again with the same rapidity as before.

Besides seizing the exact time, a due degree of power must thus be exerted, conformably to the readiness, obedience, union, or rapidity of the action ; for, should the power be deficient, the stop would not be properly effected ; and if it be excessive, the horse will be overbalanced on his haunches, and compelled consequently to move his feet after the cadence is finished.

Till horses are ready and obedient to the stop, it should not be attempted in violent and rapid gallops ; nor even then if the horse is weak, or the rider heavy.—In these cases, the double arret is used.

The *Double Arret* is the stop completed in two cadences of the gallop, which is far less distressing both to man and horse.

The body being gently thrown back, will not make the action instantaneously cease ; but the obedience of the horse makes the effort which checks half his career in the first cadence ; and, the body still being kept back, he completes it in the second.

The horse, however, till practised and made obedient to the stop, will not easily perform the double arret ; for, in the first instance, he must be taught to stop by compulsion ; and it is only when practice has brought him to obedience, that he readily stops at the easy throwing back of the body.

The *half stop* is a pause in the gallop, or the action suspended for half a second, and then resumed again.

Here the body is thrown back less determinately, lest we should so overbalance the horse that he cannot readily set off again after the finish of the cadence, which no sooner occurs than the body is brought forward, to permit the action to go on.

Thus the half stop is only a pause in the gallop, and it is mostly used to effect a change from the right leg to the left, or the opposite.

The cadence of the stop should be no shorter than the readiness and obedience of the horse will admit; the half stop not quite so short; and the two arrets still more moderate.

LEAPING.

Leaping in general.

The moveable bar for leaping should be ten feet in length, which will admit of two horses leaping abreast; should at first be from one to two feet high; and should never be very high.

As to the SEAT, it should be again observed, that *stirrups are no security to the seat in any situation on horseback*; and those who cannot forbear pressing a weight in them, had better have none when learning to leap.

An accurate balance must prevent all disturbance of the seat; for the slightest, whether the rider is thrown up from the saddle, or his body falls forward, or he gets out



The First in Leaping







of balance, is as disgraceful as falling to the ground. He should sit so close as to carry a shilling under each thigh just above the knee, one in each stirrup under the toe, and one under his breech.

When any action of the horse tends to lift the rider from the saddle, stirrups cannot keep him down. Bearing in the stirrup, indeed, must lift the rider from the saddle, and would even loosen any hold he might take with the thighs or legs.

Nothing but the weight of the body can press to the saddle. When the action is violent, however, the pressure of the thighs may be employed to hold it down; and, when the hold of the thighs is not sufficient, the legs may take a deeper and stronger hold.

Leaps are standing or flying; the first being most difficult to sit, though always practised first, because the slow and steady leaping of a properly broke horse gives the rider time and recollection, and the riding-master an opportunity to direct, and to prevent accidents.

Standing Leap.

In the standing leap, the horse first shortens, and then extends himself. Readiness in the hand of the rider is therefore requisite, to give the appropriate aids. These, if well timed, assist the horse: if otherwise, they check or embarrass him, and endanger both the animal and his rider.

(Plates XLII. and XLIII. illustrate the Leap.)

In the PERFORMANCE of this, the rider must, therefore, by a ready and fearless yielding of the bridle, leave the horse at liberty to extend himself, preserving his own

equilibrium only by leaning forward, as the horse rises, and backward as he alights.

When the horse is brought to the bar, the body is to be upright.—*The legs are to be applied to the horse's side with such firmness as to keep the rider down to the saddle, and in such a manner, viz. perpendicularly from the knee, that the action of the body shall not loosen or disturb them. The toes must be pulled up, to make the muscles firm, and to prevent the spur from approaching too near the horse; and, if necessary, they may be turned out a little to strengthen the hold. The hand must be kept in the centre, and quite low; and the reins not too short, but just by the pressure of the fingers to feel the horse's mouth.*

When at the bar, the pressure of the legs and fingers will invite the horse to rise; and as he rises, *the body comes forward and preserves its perpendicular.—The back must then be kept in, and the head firm.*

As the horse springs from his hind legs, and proceeds in the leap, *the rider must slip his buttock under him, and let his body go freely back, keeping his hands down, legs close, and body back, till the horse's hind legs have come to the ground.*

The propriety of applying the legs to hold firm in the saddle is obvious.—The hand being kept low is essential; and the bad consequences of raising it are numerous, as confining the horse, preventing the body going back, throwing the rider forward, &c.

The body coming forward to preserve its perpendicular as the horse rises before, prevents the weight of the rider from hanging on his mouth, and checking his leap, if not

pulling him over backwards. The back being hollow when the horse springs forward, the body will, of itself, fall backward if the hand be not raised to prevent it; and the head being firm may prevent a wrench of the neck, or a bite of the tongue.

Slipping the breech under gives the body more liberty to lean back, and prevents the shock of the horse's feet meeting the ground, from throwing it forward.

While the seat is thus maintained, the hand must not be neglected. In riding up to a leap, the rider must yield the bridle to the horse, guiding him straight to the bar at an animated pace;—halt him with a light hand, and upon his haunches;—when he rises, only feel the reins to prevent their becoming slack;—when he springs forward, yield the hand without reserve;—and, when his hind feet come to the ground, again collect his horse, resume his usual position, and move on at the former pace.

If the horse be too much collected previous to his leap, he will bound, or buck over, as it is called. If not sufficiently collected or animated, he will probably not clear the leap. The degree in which a horse should be collected and animated, depends on the temperament of the animal, and must be left to the judgment of the rider.

Flying Leap.

The Flying Leap is distinguished from the standing leap by its being made from any pace without a previous halt; and, although the action is quicker, it is much easier.

The PACE, however, at which the rider goes at a flying

leap, should always be moderate, in order that the horse may not rise too soon or too late.

A horse which rises too far from the bar seldom clears his leap, and risks straining by the effort to cover it: a horse, which rises too near the bar, is likely to strike his knees against it, and throw his rider, or hurt himself.

If a horse be indolent and require animation, it is better to rouse his apathy by the spur just before his head is turned toward the leap, than while he is running at it. If a horse leap willingly, let him take his own pace to it, and he will spring from his proper distance, and give himself due velocity.

Twelve yards from the leap, the rider may turn his horse to it in a trot; the horse will strike into a gallop; and, by a stroke or two before he springs, he will increase his velocity, if he perceive that the height he has to cover requires that exertion.

The SEAT in the flying leap is exactly the same as in the standing one; but as the horse keeps a more horizontal position, it is easier.

The rider, however, must not bring his body forward at the raising of the fore legs, because the spring from the hind legs immediately follows, and the body not only might not get back in time, but, if the horse did not come fair, or refused to take his leap, and checked himself, the body, if forward, might cause the rider to tumble over his head.

The rider must therefore keep his body upright; take hold with his legs; keep his hand down; and, as the horse springs forward, his body is sure to take the corresponding action of leaning back, particularly if he, at the

instant, slip his breech under him, and bring his waist forward with an exertion proportioned to the spring the horse makes.

He must also take care not to bring his body upright, nor slacken the hold with his legs, till after the hind feet have come to the ground.

In this leap, the horse requires but little support or assistance from the hand till he is coming to the ground, when the support of the hand aids in bringing the body upright: the assisting and lifting a horse over leaps may be done only by old practitioners, and even by them only when a horse leaps freely and determinedly.

Whips should not be used when the rider first practises leaping.

CRITICAL SITUATIONS.

When a horse is addicted to stumbling, rearing, kicking and bolting, plunging, shying, and restiveness, the seat is maintained as in leaps; and the arms are held firm to the body, the hands kept up, and the reins separate and rather short than otherwise. By this means, the horse's head being raised, he can with less ease either rear or kick, because, for such purposes, he must have his head at liberty. It is fortunate that horses which rear high seldom kick, and *vice versâ*.

On these occasions, the first operation of the rider is to separate the reins, &c.

The body must be kept upright but flexible, to repel every effort the horse may make. The balance must be

preserved by the muscles of the thighs. The legs are to be kept near the horse, but not to grasp till absolutely necessary.

When he lifts his fore legs, the breech must be thrust out behind, by which the rider is prepared if he rears.

As the fore feet come to the ground, the breech must be slipped under, which prepares for his kicking or springing forward; the legs being then in a situation to grasp, and the hands to keep a firm hold.

In all displays of viciousness, the rider should first see that the saddle or girths do not pinch the horse, that the bit does not hurt his lips by being too high in his mouth, &c.

Stumbling.

By the rider pressing his legs to the horse's flanks, and keeping up his head, he may be made to go light on his fore legs; and the same should be done if he actually stumble, so as to afford him instant assistance.

Hence it is evident that the bridle should be of such length in the hand, that, in case of stumbling, the rider may be thus able to raise the horse's head by the strength of his arms and the weight of his body thrown backward. If the rein be too long, it is evident that, in effecting this manœuvre, the rider is in danger of falling backward as the horse rises.

By thus pressing the legs to the horse's sides, he may be made to keep his haunches under him in going down hill, or may be helped on the side of a bank.

Rearing.

This is the most dangerous, as it risks his falling backwards.

When a horse rises straight up, the rider must throw his body forward, giving him all the bridle. The weight of the body will oblige him to come down; and the moment that his fore feet are *near* the ground, and *before* he touches it, both the spurs must be given him as firmly and as quickly as possible.

Another mode of subduing him is, whenever the rider is aware of the horse's disposition to rear, to have the reins separated; and the instant he perceives him going to rise, to slack one hand and bend him with the other, keeping the hand low. This compels him to move a hind leg, and being thrown off his balance, he necessarily comes down with his fore feet. He should then be twisted round two or three times, to convince him of the rider's superiority, which confuses, baffles, and deters him from rearing to any dangerous height.

To break horses of this dangerous vice, it has been sometimes expedient to leap from the horse, and pull him backwards. This so frightens a horse, that he is wary of giving the opportunity of using him so again. It is, however, an expedient to be attempted only at a particular crisis, and by persons perfectly collected, active, and agile.*

* On this subject, an anonymous writer, in answer to a query, says, "I would advise you by no means to try the experiment in question, either as operator yourself, or on your own horse. At

Kicking.

Horses subject to kick, either when they go forward, or stand still, must be kept much together, or held-in closely.

When this is attempted, the hands, though fixed, must not pull at the horse, if he do not attempt to force the hand, and get his head, but must leave him at liberty to go forward.

If, however, he attempt to get his head down, which would enable him to kick with such violence as to throw himself, he may have the head confined up. This disarms him, and he makes a bolt from all-fours.

all events, pray make trial first of the following prescription, which will in most cases be found an excellent preventive, if not a total cure of the propensity complained of, and which has the advantage over the method respecting which you inquire, of being much easier and safer in its application, and, I may perhaps add, surer in its effects, and less expensive on the whole.

“Get a strong thick curb bit, with a good deep port reversed—that is, the curve of the mouth-piece must project towards the outside of the horse's mouth, and not inwardly towards his throat, as in the common port bit. The thickness and exact curve of the bit should be calculated according to the size, strength, and hardness of mouth of the animal for which it is intended. For a very hard-mouthed horse, the bit should be made with a very deep port, and as thin as possible, consistently with the strength requisite.

“In nine cases out of ten, I have found that confirmed rears are tender-mouthed, and the habit has been probably induced by their being bitted and handled too severely. A martingale will be found a useful addition to the bit I have described. Its full efficacy can only be sufficiently appreciated by its being used several times till the horse has become in some degree accustomed to it.”

When a horse kicks, the rider must throw the body backward.

It is an effective punishment to twist a horse round a few times for this fault. If this is done toward his weak or unprepared side, for every horse has a favourite side, astonishment and confusion will deter him from farther contention.

In the case of bolting, the rider must not exert one continued pull, but must make repeated pulls until the horse obeys. Horses accustomed to be allowed to bear on the bit would not understand the steady pull as a signal to desist; and some horses would so throw up their heads as to deprive the rider of all power without dropping his hand, when the horse would drop his head. In that case, a second pull would find his mouth, and thus speedily the progress of the horse might be stopped.

Plunging.

In plunging, a horse gets his head down, cringes his tail between his quarters, sets his back up, swells his body to burst his girths, and, in this position, kicks and plunges till his breath can be held no longer, that is, till he makes six or eight plunges.

To sit these plunges, is to cure them; and to do this, the rider must take a firm hold with his legs, and be mindful that the horse, in getting his head down, does not pull the rider forward.

There is no danger of his rearing; and therefore the rider has only to keep his body back, and hold firmly with his hands, to prevent him throwing himself down.

Shying, etc.

When a horse, either by shying or restiveness, springs to one side, or turns short round, the rider's security depends on strict conformity to the rules already laid down, as to not bearing in the stirrups; keeping the legs near to the horse, to be ready on these sudden and unexpected occasions to lay hold; and yielding the body to go with the horse.

When a horse is about to fly to one side, he may be stopped by his rider's leg being pressed on the side he would fly to, and by keeping his head high and straightforward, so as to prevent his looking toward the object he starts at, unless indeed it be something you desire to accustom him to the sight of, and then, whether you keep his face to it throughout, or avert his face at first and turn it gently toward it at last, great steadiness is necessary.

When a horse curvets irregularly, and twists himself to and fro, his head should be turned to one side, or both alternately, without permitting him to move out of the track, and the rider's leg should be pressed against the opposite side. In this case, he cannot spring on one side, because the pressure of the leg prevents him, nor will he spring to the other, because his head is turned that way, and a horse never starts to the side to which he looks.

A horse, moreover, will not fly back from anything, but go forward, if both legs be pressed against his sides. Thus he may be made to pass a carriage or other object in a narrow road; and here perseverance is especially necessary when the object is just reached, or partly passed, for if in

the habit of going back and turning round when frightened, he will certainly do so when, by the hand slackening and legs failing to press, he discovers that you are irresolute; and this he would probably do at the most dangerous moment, when there was scarcely room for him to turn, and the wheels might take him in the rear. To touch his curb rein at such a moment would add to the confusion and danger.

Restiveness.

The horse generally commences his attack by stopping, turning short round, mostly to the right hand, as taking the rider to the greatest disadvantage. He expects the rider will oppose the opposite hand, designedly attacks the weakest, and is so prepared against its efforts, that it is vain to attempt them.

It must be the rider's rule—never to contend with the horse on that point on which he is prepared to resist.

Instead, therefore, of attempting to prevent the horse with his left hand, the rider must attack him with his right, turn him completely round, so that his head is again presented the right way, and then must apply the whip.

If he turn round again, the rider must still attack his unguarded side, turn him two or three times, and let the heel and spur, if necessary, assist the hand, before he can arm or defend himself against it.

If he still refuse to go the right way, the rider must take care that he go no other, and immediately change his attack, turning him about and reining him backward, which the

horse is easily compelled to do when he sets himself against going forward.

In these contests, the rider must be collected, and have an eye to the surrounding objects; for restive horses try their utmost to place their riders in awkward situations, by sidling to other horses, carriages, the foot-pavement, the houses, &c.

In this case, the rider, instead of pulling him from the wall, must bend his head to it, by which his side next the wall is rendered concave, and his utmost endeavours to do injury are prevented. The instant, therefore, that the rider perceives his horse sidling to any object, he must turn his head to that object, and back him from it.

There are some horses who fix themselves like stocks, setting all endeavours to move them at defiance.

There, happily, their defence can in no way endanger the rider. It must, however, be converted to punishment. Let them stand; make no attempt to move them; and in a short space, frequently less than a minute, they will move of themselves.

When these various defences, however, are not powerfully set up, the general rule is to push the horse forward; and, for this purpose, at first to make use of the switch, as it alarms him least, for the spurs surprise a horse, abate his courage, and are likely to make him restive. Indeed, the application of the whip, or spurs, except to shift the croupe, or give efficacy to the hands, is of little use; and to repeat either, to make a restive horse go forward, is certainly wrong.

Whatever passion possesses the rider, it prevents that

concord and unity taking place which ever should subsist between the rider and his horse. The rider, therefore, must always be disposed to amity, and should never suffer the most obstinate resistance of the horse to put him out of temper. If the contest do not demand his utmost exertion of strength, he should be able to hum a tune, or converse with the same composure and indifference as though the horse were all obedience.

By this means, the instant a horse finds himself foiled, he desists, having no provocation to contend farther, and is abashed at his own weakness. It is the absence of passion which, added to cool observation, makes the English the best riders and drivers in the world.

TREATMENT OF THE HORSE.

A horse ought not to be rode a stage while in physic, nor on the day of its coming off.

If a horse be pushed at first setting out on a journey, or be compelled to make long stages, or be deprived of his customary baits, he gets jaded, and every additional mile adds to his uneasiness.

Moreover, at setting out in the morning, a well-kept horse is necessarily full of food, and consequently until his great gut be properly emptied, brisk action occasions uneasiness or pain, which causes restlessness.

Hence, it follows that, although expedition be indispensable, the horse ought not to be put on his best pace at first, but considerably within it. Even this pace should be for a short space only; the reins should be loosened; the mouth

played with; and if he do not evacuate, the pace may be repeated once more,—unless indeed he sweat much with the first, which is a sign of weakness, or that his dung is hard, and he requires purging.

While on the journey, the rider should be less attentive to his horse's nice carriage of himself, than to his own encouragement of him, and keeping him in good humour.

Though generally the rider should raise his horse's head, yet when he flags, in consequence of a long day or hard work, the rider may indulge him with bearing a little more upon the bit than he would in taking a mere airing exercise, or afternoon's canter in the Park.

Keeping company with some other horseman facilitates a stage, by the emulation it excites; so that a dull animal, which one can scarcely get seven miles an hour from, will do nine or ten without fatigue when in company.

In road-riding, a picker is indispensable both in winter and summer. In winter, it is necessary to relieve the sole when snow accumulates there. When, however, the traveller knows that snow is on the ground, he may avoid the trouble of dismounting by previously ordering his horse's soles to be payed over with tar, or with tallow having no salt in it. At all times, when the roads have received fresh dressings, a picker is indispensable, because a loose stone is very liable to lodge in the hollow of the foot, and is dangerously driven backwards between the frog and the shoe, at every step the horse takes.

Pace and length of stage must be adapted to the heat of the weather in summer, and to the depth of the roads in

winter; both seasons having the effect of knocking up the horse. In either case, a cordial promptly administered recovers the horse for the prosecution of his journey.

The cordial readiest provided, and which should be kept at hand by the provident traveller, is in the form of ball, and composed of aniseeds, ginger, carraway, of each, powdered, half an ounce, and mixed up with treacle and meal to the proper consistence. But good ale or porter, from one pint to a quart, made warm, operates sooner, and, upon emergency, is nearly as readily obtained as the ball.

As, upon setting out, we should not go off at the quickest pace, so, upon coming in, should we not dash into our quarters with the perspiration streaming from each pore, in the mild season, nor covered over with dirt, in consequence of the pace, in wet weather.

Even in winter, the perspiration flies from a strong horse, if in condition, upon coming into more sheltered places, and the practices he is then subjected to, are commonly of such a nature as to cause disease in one way or another, in embryo, if not immediately.

The rider is greatly to be blamed who stands quietly by, or hides his head in the parlour, while his horse is led about to cool at such a season, or has the dirt washed off by plunging him in a horse-trough or pond, or his legs brushed in cold water in the open yard; the consequence of which is cough or colic, or bad eyes, or swelled legs, or inflammation of some vital part, which deprives the animal of life.

On the contrary, the horse, on coming in, after being

coaxed to stale, should undergo (in winter-time in doors) a wisping all over with straw, beginning at the head, and proceeding to the neck and fore-quarters.

He should, at the same time, have before him a lock of sweet hay, in his rack, or a prickle, or the-hand; and the rider should see whether he eats or not, whether he enjoys the wisping, and whether he chiefly evince a desire to lie down or a craving for food.

The girths having been already loosened, but the saddle still remaining on his back; the horse's head should be turned to the rack, and his hind-quarters, legs, and belly, sheath and fork, should be wisped.

After this, the saddle should be removed by sliding it back over the croupe; and the dressing should be extended to the withers, back, and so completely all over the carcass, until it is dry.

If the horse refuse the first proffer of hay, the rider may conclude that he has been pushed too much, as to time or length. If he still refuse his food, though the dressing be finished, the rider may be assured that his stomach is disordered, and he must be cordialled.

In winter, a warm mash of malt is most eligible; but, if not at hand, a bran mash with an admixture of oatmeal and a quart of good ale, may be given. In summer, a cordial ball will restore the tone of his stomach, without increasing the heat of his body so much as a mash would. If the horse is not aged, nor inured to cordialling, a small pail of stout water-gruel, almost cold, excels all other cordials, and supersedes the necessity of watering: he

will take his supper an hour or so afterwards, with a relish.

The traveller ought to look to every particular himself.—In the next place, let him see that his horse gets his allowance of corn, that it be good, and that it contain no indications of having been in a manger before; for, in that case, he must wait by him until all the food is devoured.

Dry food is alone proper to travel upon, and oats are the best; much hay being apt to engender flatulencies. When, however, a very long stage is to be taken, or it is cold, dreary, wet, or windy, a handful of crushed beans sustains him admirably, staying by him and imparting vigour for a long time.

The horse should not be denied water often; though not too much at one time, nor too cold, nor immediately after a meal.

The horse's feet and shoes should be looked to, to ascertain if aught require repair, in order that it may be furnished as soon as he has recovered from his fatigue.—His limbs, moreover, should be examined all over, for cracks, pricked foot, &c., and the body, for saddle-galls, &c.

Now, as ever, the horse's dunging should be looked to. Even if in full condition, having been well and regularly fed, and as regularly worked, he will contract a tendency to constipation; the least ill consequence of which is defective pace, or short step, arising from more laboured action. As the inconvenience may be suffered to last, he sweats immoderately at the least extra exertion, his eyes lose their wonted brightness, his mouth becomes hot, and his

manner is languid. All these evils may be prevented by timely physicing, whenever the dung is seen to fall upon the ground without the pellets breaking. Even a little green food, or a day's mashing with bran, thin oatmeal gruel, and the like, will soften the dung considerably. It must be remembered that these things must be undertaken on blank days, when the traveller is certain the horse will not be ridden a stage.

DRIVING.

[Throughout this treatise, the less is said, that its general principles are involved in those of riding, which have been already delivered so much in detail.]

IMPORTANCE OF DRIVING AS AN ART, IN ANCIENT AND MODERN TIMES.

Among the ancients, for more than one thousand years, the greatest honour that could be bestowed upon a man was a sprig of the wild olive tree entwined round his brow, for having gained a victory in the chariot-race at the Olympic games of Greece. This sprig of olive, moreover, was accompanied by other marks of distinction: the wearer of it was not only honoured with statues and inscriptions during his life-time, but the immortal Pindar, or some other great poet, was called upon to hand his name down to posterity in an ode.

The Olympic games were revived, as a religious ceremony, by Iphitus, an Elean, about nine hundred years before Christ. They were celebrated near Olympia, in the territory of Elis. Horse and chariot races were considered their noblest sports. No one was there prevented from driving his own chariot; and kings were often seen contending against kings.

The Greeks were the most enlightened of the ancients,

and their taste in the arts has never been even rivalled. What they did, therefore, on this occasion, could not be considered as in bad taste ; and, when we remember that the celebration of these pastimes outlived the laws, customs, and liberty, of their country, we need not say more in their vindication.

The honours of victory were not even confined to the brave and skilful man who won the race : even the horses were crowned amidst the applauses of the spectators ; and in one race, where forty chariots were broken, the victorious one was preserved in the temple of Apollo. Such being the havoc among the competitors, it is not wonderful that Ovid should say, that the honour of contending for the Olympic prize was almost equal to the winning of it.

Sophocles modestly speaks of ten starting at the same time in the race ; but Pindar, availing himself perhaps of poetic license, makes the number forty. Four horses driven abreast was the usual number. The length* of the course on which they ran did not exceed an English mile, and as they had to make twenty-two turnings round the two pillars—generally, we may suppose, at full speed—it is not difficult to imagine what dreadful accidents must have happened.

Nothing indeed but the form of chariot used could have ensured safety to any one. From the representations on

* The Circus Maximus at Rome, in which the Romans exhibited their chariot-races, was an oval building of one thousand eight hundred feet in length, and four hundred in breadth.

ancient coins, it appears to have been very low, and only on two wheels, somewhat resembling our curricule. It had of course no springs; and, as there was no seat for the charioteer, much of his skill consisted in preserving his balance, and keeping upon his legs.

According to Pausanias, the following was the method of starting :—The chariots entered the course according to order, previously settled by lot, and drew up in a line. They started at a signal given, and to him who passed the pillar at the top of the course twelve times, and that at the bottom ten times, in the neatest manner, without touching it, or overturning his chariot, was the reward given.—As, however, it was the aim of every one who started to make for this pillar, as to a centre, we can easily imagine the confusion there must have been in forty, twenty, or even ten chariots, all rushing to one given point, amidst the clanging of trumpets, &c.

The following translation of a description of a chariot-race, from the *Electra*, of Sophocles, is worthy of a place.

“ When on the second day, in order next
Came on the contest of the rapid car,
As o’er the Phocian plain the orient sun
Shot his impurpled beams, the Pythic course
Orestes enter’d, circled with a troop
Of charioteers, his bold antagonists.
One from Achaia came; from Sparta one;
Two from the Lybian shores, well practised each
To rule the whirling car: with these the fifth,
Orestes, vaunting his Thessalian mares:
Ætolia sent a sixth, with youthful steeds
In native gold arrayed: the next in rank

From fair Magnesla sprang : of Thrace the eighth
His snow-white coursers from Thesprotia drove :
From heaven-built Athens the ninth hero came :
A huge Bæotian the tenth chariot filled.
These, when the judges of the games by lot
Had fixed their order, and arranged their cars,
All, at the trumpet's signal, all at once
Burst from the barrier ; all together cheer'd
Their fiery steeds, and shook the floating reins.
Soon with the din of rattling cars was fill'd
The sounding hippodrome, and clouds of dust
Ascending, tainted the fresh breath of morn.
Now mix'd and press'd together, on they drove,
Nor spared the smarting lash ; impatient each
To clear his chariot, and outstrip the throng
Of dashing axles, and short-blowing steeds,
They panted on each other's necks, and threw
On each contiguous yoke the milky foam.

“ But to the pillar as he nearer drew,
Orestes, reining-in the nearest steed,
While in a larger scope, with loosen'd reins,
And lash'd up to their speed, the others flew,
Turn'd swift around the goal his grazing wheel.

“ As yet erect, upon their whirling orbs
Roll'd every chariot, till the hard-mouth'd steeds
That drew the Thracian car, unmaster'd broke
With violence away, and turning short
(When o'er the hippodrome with winged speed
They had completed now the seventh carcer),
Dash'd their wild foreheads 'gainst the Lybian car.
From this one luckless chance a train of ills
Succeeding, rudely on each other fell
Horses and charioteers, and soon was fill'd
With wrecks of shattered cars the Phocian plain.

“ This seen, the Athenian, with consummate art,
His course obliquely veer'd, and steering wide

With steady rein, the wild commotion pass'd
Of tumbling chariots and tumultuous steeds.
Next, and, though last, yet full of confidence
And hopes of victory, Orestes came ;
But when he saw of his antagonists
Him only now remaining, to his mares
Anxious he rais'd his stimulating voice.
And now with equal fronts abreast they drove,
Now with alternate momentary pride
Beyond each other push'd their stretching steeds.

“ Erect Orestes, and erect his ear
Through all the number'd courses now had stood ;
But luckless in the last, as round the goal
The wheeling courser turn'd, the hither rein
Imprudent he relax'd, and on the stone
The shatter'd axle dashing, from the wheels
Fell headlong ; hamper'd in the tangling reins
The frightened mares flew divers o'er the course.

“ The throng'd assembly, when they saw the chief
Hurl'd from his chariot, with compassion mov'd,
His youth deplored ; deplored him, glorious late
For mighty deeds, now doom'd to mighty woes ;
Now dragg'd along the dust, his feet in air :
Till hasting to his aid, and scarce at length
The frantic mares restraining, from the reins
The charioteers released him, and convey'd,
With wounds and gore disfigur'd, to his friends.
The just Amphityons on the Athenian steeds
The Delphic laurel solemnly conferr'd.”

In a political view, these games were productive of local advantages ; for, being sacred to Jupiter, they protected the inhabitants of Elis against all the calamities of war. In an economical view, they were of general use ; for, as

Greece was generally short of horses, nothing was so likely to encourage the breeding of them as the emulation thus raised among the different states. The circulation of money also was not a trifling consideration; for the olive crown was obtained at great expense.—By these games being celebrated at the beginning of every fifth year, the Greeks settled their chronology and dates; and, as they lasted a thousand years, a great part of the traditional history of Greece rests upon their base.

That the honour of the prize was above all price, the following anecdote shews.—A Spartan having gained the victory at the Olympic games with much difficulty, was asked what he should profit by it? “I shall have the honour,” said he, “of being posted before my king in battle.”—As a further proof of the value and the moral effect of these contentions for honour, it is stated that, when a conqueror returned to his native city, he made his entry through a breach in the wall—by which was implied that cities inhabited by such men had no need of walls.

A senator of Rome, indeed, says Gihbon, “or even a citizen, conscious of his dignity, would have blushed to expose his person or his horses in a Roman circus. There, the reins were abandoned to servile hands; and, if the profits of a favorite charioteer sometimes exceeded those of an advocate, they were considered as the effects of popular extravagance, and the high wages of a disgraceful profession.”—The Romans, with more pride, were far less intellectual than the Greeks; but it must still be borne in mind, that, inconsistently enough, the interest taken in the

charioteers of Rome shook the very foundation of the government.

In modern times, notwithstanding the sneers directed against gentlemen-coachmen and driving-clubs, it is to them chiefly that this country is indebted for the present excellent state of the roads, and for safe and expeditious travelling.

The taste for driving produced, between men of property and those connected with the road, an intercourse which has been productive of the best results. Road-makers, and those who have the care of roads, if they have not acted under the immediate direction of these amateur drivers, have been greatly benefited by their advice—doubly valuable, as proceeding from knowledge of what a road ought to be.

The intercourse also that has lately been carried on between proprietors of inns and of coaches, and gentlemen fond of driving, has greatly tended to direct the attention of the former to the accommodation and comfort of travellers. The improvement in carriages—stage-coaches more especially—would never have arrived at its present height, but for the attention and suggestions of such persons.

Moreover, the notice taken by gentlemen of coachmen who are at once skilful, and who conduct themselves well, has worked the reformation which has been of late years witnessed in that useful part of society.

Gentleman-driving, however, has received a check, very few four-in-hands being visible. The B. D. C., or Benson Driving Club, which now holds its rendezvous at the Black Dog, Bedford, is the only survivor of those nume-

rous driving associations whose processions used, some twenty years ago, to be among the most imposing, as well as peculiar spectacles in and about the metropolis.

THE ROADS.

The excellence of our present mail-coach work reflects the highest credit on the state of our roads. The hills on great roads are now cut triangularly, so that drivers ascend nearly all of them in a trot. Coachmen have found out that they are gainers here, as, in the trot, every horse does his share, whereas, very few teams are all at work together when walking.

As, however, dreadful accidents have occurred to coaches when descending hills, a very simple expedient has been suggested, by which these accidents may be avoided. It is merely a strip of gravel, or broken stone, about one yard wide, and four or five inches deep, left on the near side of a hill, and never suffered to bind or diminish. This would afford that additional friction (technically called a bite) to the two near-side wheels, so that the necessity of a drag-chain (never to be trusted) would be done away with, and even in case of a hame-strap or pole-chain giving way, one wheel-horse would be able to hold back a coach, however heavily laden. No inconvenience to the road, it is observed, could arise from this precaution, as carriages ascending the hills would never be required to touch the loose gravel, it not being on their side the road.

This has been objected to, because some of the loose stones might find their way into the middle of the road.

But, admitting this might be the case, a trifling attention on the part of the surveyor would obviate the objection. A man might be employed every second or third day to rake these stones back again. At the same time, it is obvious that the neat appearance of a road is not to be put in the scale against the limbs and lives of the people.—Some more permanent contrivance than loose stones might even be found.

CARRIAGES.

Of carriages, those with two wheels are the cheapest, lightest, and most expeditious; but, however sure-footed the horse, and however skilful the driver, they are comparatively dangerous vehicles.

As to gentlemen's carriages, in this country, it has justly been observed, that the view at Hyde Park Corner, on any fine afternoon, in the height of the London season, is enough to confound any foreigner, from whatever part of the world he may come. He may there see what no other country can show him. Let him only sit on the rail, near the statue, and in the space of two hours he will see a thousand well-appointed equipages pass before him to the Mall, in all the pomp of aristocratic pride, in which the horses themselves appear to partake. The stream of equipages of all kinds, barouches, chariots, cabriolets, &c. and almost all got up "regardless of expense," flows on unbroken until it is half-past seven, and people at last begin to think of what they still call dinner. Seneca tells us that such a blaze of splendour was once to be seen on

the Appian way. It might be so—it is now to be seen nowhere but in London.

As to stage-coaches, their form seems to have arrived at perfection. It combines prodigious strength with almost incredible lightness; many of them not weighing more than about 18 cwt., and being kept so much nearer the ground than formerly, they are of course considerably safer.

Nothing indeed can be more favourable to safety than the build of modern coaches. The boots being let down between the springs, keep the load, and consequently the centre of gravity, low; the wheels of many of them are secured by patent boxes; and in every part of them the best materials are used.

The cost of coaches of this description is from 130*l.* to 150*l.*; but they are generally hired from the maker at 2½*d.* to 3*d.* per mile.

It is said to be the intention of Government to substitute light carriages with two horses for the present mail-coaches drawn by four. On this, a writer in the Quarterly Review observes, that when the mail-coach of the present day starts from London for Edinburgh, a man may safely bet a hundred to one that she arrives to her time; but let a light two-horse vehicle set out on the same errand, and the betting would strangely alter. It is quite a mistaken notion that a carriage is less liable to accidents for being light. On the contrary, she is more liable to them than one that is laden in proportion to her sustaining powers. In the latter case, she runs steadily along, and is but little disturbed by any obstacle or jerk she may meet on the

road : in the former, she is constantly on "the jump," as coachmen call it, and her iron parts are very liable to snap.

It may in this place be observed, that no stage-coach should be permitted to travel the road with wheels secured only by the common linchpin. It is in consequence of this that innumerable accidents have happened to coaches from wheels coming off; and in these improving and fast times, such chances should not be allowed to exist.

It may not be uninteresting to the uninitiated to learn from the same clever and experienced writer how a coach is worked.—Suppose a number of persons to enter into a contract to horse a coach eighty miles, each proprietor having twenty miles; in which case he is said to cover both sides of the ground, or to and fro.—At the expiration of twenty-eight days a settlement takes place, and if the gross earnings of the coach be 10*l.* per mile, there will be 800*l.* to divide between the four proprietors, after the following charges have been deducted, viz. tolls, duty to government, mileage (or hire of the coach to the coach-makers), two coachmen's wages, porter's wages, rent or charge of booking-offices at each end, and washing the coaches. These charges may amount to 150*l.*, which leaves 650*l.* to keep eighty horses, and to pay the horse-keepers for a period of twenty-eight days, or nearly 160*l.* to each proprietor for the expenses of his twenty horses, being 2*l.* per week per horse. Thus it appears that a fast coach properly appointed cannot pay, unless its gross receipts amount to 10*l.* per double mile; and that even then the proprietor's profits depend on the luck he has with his stock.

COACH-HORSES.

A great change has lately taken place as to the English coach-horse; and this is the foundation of many other accompanying changes.

Fifty years ago, the putting a thoroughbred horse into harness would have been deemed preposterous. In the carriages of gentlemen, the long-tailed black or Cleveland bay—each one remove from the cart-horse—was the prevailing sort; and six miles an hour was the extent of the pace. Now, however, this clumsy-barrelled, cloddy-shouldered, round-legged animal, something between a coach and a dray horse, as fat as an ox, and, with all his prancing at first starting, not capable of more than six miles an hour, and rendered useless by a day's hard work, is no more seen; and, instead of him, we find a horse as tall, deep-chested, rising in the withers, slanting in the shoulders, flat in the legs, with more strength, and with treble the speed.

The animal formerly in use cost from 30*l.* to 50*l.*—Two hundred guineas is now an every day price for a cabriole horse; and 150 guineas for a coach-horse, for private or gentlemen's work. A pair of handsome coach-horses, fit for London, and well broken and bitted, cannot be purchased under 200 guineas; and even job-masters often give much more for them to let out to their customers.

The origin of this superior kind of coach-horse is still, however, the Cleveland bay, confined principally to Yorkshire and Durham, with perhaps Lincolnshire on one side and Northumberland on the other, but difficult to be me

with pure in either county. Cleveland indeed, and the Vale of Pickering, in the East Riding of Yorkshire, are the best breeding countries in England for coach-horses, hunters, and hackneys.

When the Cleveland mare is crossed by a three-fourth or thoroughbred horse of sufficient substance and height, the produce is the coach-horse most in repute, with his arched crest and high action.

From the same mare and the thoroughbred of sufficient height, but not of so much substance, we obtain the four-in-hand, and superior curricule horse.

From less height and more substance, we derive the hunter, and better sort of hackney.

From the half-bred, we have the machiner, the poster, and the common carriage-horse.

The best coach-horse is a tall, strong, over-sized hunter. The hackney has many of the qualities of the hunter on a small scale.

There is some deception, however, even as to the best of these improved coach-horses. They prance nobly through the streets, and they are capable of more work than the old clumsy, sluggish breed ; but still they have not the endurance that is desirable ; and a pair of poor post-horses, at the end of the second day, would beat them hollow.

In this carriage-horse, the bending of the upper joints and the consequent high lifting of the feet are deemed an excellence, because they add to the grandeur of his appearance. But this is necessarily accompanied by much wear and tear of the legs and feet, the effect of which is very soon apparent.

The most desirable points in the coach-horse are substance well placed, a deep and well-proportioned body, bone under the knee, and sound, open, tough feet.

One part of the old system, however, remains ; namely, that although little horses, well bred, are the fashion, large horses are still employed in heavy work. It must indeed be so. Horses draw by their weight, and not by the force of their muscles ; although these, by carrying forward the centre of gravity, assist the application of that weight : it is the weight of the animal which produces the draught, and the power of the muscles serves to direct it. The hind feet form the fulcrum of the lever by which this weight acts against a load, and the power exerted is in proportion to the length of the lever, if the weight remain the same. Large animals, therefore, draw more than small ones, though they may have less muscular power, and are unable to carry weight so well.

Nothing can better shew that horses draw by their weight than the frequent occurrence that a horse is unable to draw a cart out of a slough until a sack of corn is thrown on his back, when he has little difficulty in doing it. Thus it is, that what are technically called lobbing-goers, take more weight with them than horses of better action.

As the application of the weight or force proceeds from the fulcrum formed by the hind feet, good hind legs and well spread gaskins are essential points in a coach-horse. We even sometimes see that a waggon-horse, when brought to a pull, will not touch the ground at all with his fore feet.

Another reason why little horses are unfit for heavy

work is, that they will seldom walk and draw at the same time; for if they walk, they catch at their collars, and do but little. They never take anything like an even share of draught.

By calculations as to the mean strength of animals, it appears that a horse drawing horizontally, and at the rate of two miles and a half in an hour, can work for eight hours in succession against a resistance of 200 lbs. If that pace be quadrupled, he finds an eighth part of the time sufficient. Thus we can pretty nearly measure a horse's powers in harness.

Whether we are carrying supposed improvement too far, and sacrificing strength and endurance to speed, is a question not difficult to be resolved.

A horse at a pull is enabled, by the power and direction of his muscles, to throw a certain weight against the collar. If he walk four miles in the hour, part of the muscular energy is expended in the act of walking; and consequently, the power of drawing must be proportionally diminished. If he trot eight miles in the hour, more of that energy is expended in the trot, and less remains for the draught. But the draught continues the same, and, to enable him to accomplish his work, he must exert his energies in a degree so severe and cruel, that it must speedily wear him out. Hence, there is no truth so easily proved, or so painfully felt by the post-master, as that it is the pace that kills.

Moreover, many a horse used on our public roads is unable to employ all his natural power, or to throw his weight into the collar, in consequence of being tender-footed, or

lame. Being bought, however, at little price, he is worked on the brutal principle that he may be "whipped sound!"—And so he is apparently. At first, he sadly halts; but, urged by the torture of the lash, he acquires a peculiar mode of going. The faulty limb keeps pace with the others; but no stress or labour is thrown upon it; and he gradually contrives to make the sound limbs perform among them all the duties of the unsound one. Thus he is barbarously "whipped sound," and cruelty is for the time undeservedly rewarded. After all, however, what is done? Three legs are made to do that which was almost too much for four. Of course, they are most injuriously strained, and quickly worn out; the general power of the animal is rapidly exhausted; and, at no remote time, death releases him from his merciless persecutors.

Happily, art is doing what humanity refuses. Railroads are rendering draught comparatively easy. An instance has been described of the power of a horse when assisted by art, as exhibited near Croydon.—The Surrey iron rail-way being completed, a wager was laid, that a common horse could draw thirty-six tons for six miles along the road, drawing his weight from a dead pull, and turning it round the occasional windings of the road. A numerous party assembled near Merstham to see this.—Twelve waggons loaded with stones, each waggon weighing above three tons, were chained together, and a horse, taken promiscuously from a timber cart, was yoked to the train. He started from a house near Merstham, and drew the chain of waggons with apparent ease almost to the turnpike at Croydon, a distance of six miles, in one hour

and forty-one minutes, which is nearly at the rate of four miles an hour.—In the course of the journey, he stopped four times, to shew that it was not by any advantage of descent that his power was facilitated; and, after each stoppage, he again drew off the chain of waggons with great ease.—A person who had wagered on the power of the horse, then desired that four more loaded waggons should be added to the cavalcade; and with these, the same horse set off again with undiminished pace.—Still further to shew the effect of the railway in facilitating motion, the attending workmen, to the number of fifty, were directed to mount on the waggons; and the horse proceeded without the least distress. Indeed, there appeared to be scarcely any limit to the power of his draught.—After this trial, the waggons were taken to the weighing-machine, and it appeared that the whole weight was as follows :

	tons.	cwt.	qrs.	.
12 Waggon first linked together	38	4	2	
4 Ditto, afterwards attached	13	2	0	
Supposed weight of fifty labourers	4	0	0	
	55	6	2	

It is fortunate for breeders of horses that a perfect form is not necessary to a good coach-horse. Some of those indeed which the London dealers sell at high prices for gentlemen's work, are such brutes when out of harness, that no man would ride them for their worth. The strong and lengthy shoulder, with well-bent hind legs, are not absolutely necessary; and a good head and tail, with a little high action, are all that is essential.

The following are useful hints for purchasers of coach-horses.

No gentleman should purchase a horse without a good trial of his mouth and temper.

To be perfect in the first respect, the horse should be what is called on the road "a cheek horse;" that is, should require very little curb, should always be at play with his bit, and yet not afraid of it, and should have each side of his mouth alike.

To a gentleman's leader, a good mouth is most essential, and then, the higher his courage, the safer he is to drive. With stage-coach horses, mouth is not of so much consequence, because they are always running home, and there is no turning and twisting, as in gentlemen's work, which is often in a crowd. A whistle, or a click with the tongue, should make a gentleman's leader spring to his collar in an instant; one that requires the whip should be discharged.

With wheel-horses which are steady, and hold well, a coachman may almost set his leaders at defiance; but, if they are otherwise, danger is at hand. It is not a bad plan to purchase wheelers out of coaches, after they have been about six months in regular work. For from sixty to eighty guineas, the best of any man's stock may be picked; and a sound, well-broke coach-horse, is not dear at that price.

The coach-horses of gentlemen should be high in flesh, as it enhances their appearance, and is no obstacle to pace.

A sound five-year old horse, with good legs and feet, and driven only in harness, will last, on an average, from six to

ten years in gentlemen's work, and will afterwards be very useful for other purposes.

The average price of horses for fast stages is about 23*l*. Fancy teams, and those working out of London, may be rated considerably higher; but, taking a hundred miles of ground, well horsed, this is about the mark. The average period of each horse's service does not exceed four years in a fast coach—perhaps scarcely so much. In a slow one, it may extend to seven. In both cases, horses are supposed to be put to the work at five or six years old.—The price named as the average may appear a low one; but blemished horses find their way into coaches, as do those of bad temper, &c.

As no labour, while it lasts, is harder than that of coach-horses in fast work, it is wrong to purchase those which are infirm, as many proprietors do. Generally speaking, such horses are out of their work half their time, and are certain to die in their owner's debt. As the roads now are, blind horses are less objectionable than infirm ones. A blind horse that goes up to his bit is both pleasanter and safer to drive than one with good eyes that hangs away from his work. Blind horses, however, work best in the night.

A horse cannot be called a coach-horse, unless he has good legs and feet. As a wheel-horse, he is never to be depended upon down hill, if he have not sound limbs. He cannot resist weight, if he be weak in his joints. To bad legs and feet, are owing numerous accidents to coaches, many of which the public hear nothing of. If horses, on the contrary, have good legs and feet, they will last, even

in the fastest work, many years, provided they are shod with care, and well looked after.

Proprietors of coaches have at length found out that it is their interest to be humane and liberal to their horses, because the hay and corn market is not so expensive as the horse market. They have, therefore, one horse in four always at rest; in other words, each horse lies still on the fourth day. Generally considered, perhaps, no animal toiling solely for the profit of man, leads so comfortable a life as the English coach-horse: he is sumptuously fed, kindly treated, and if he do suffer a little in his work, he has twenty-three hours in the twenty-four of perfect ease; he is now almost a stranger to the lash; nor do we ever see him with a broken skin. No horse lives so high as a coach-horse. Hunters, in the hunting season, do not eat the quantity of corn that coach-horses do; for the former are feverish after their work, which is not the case with the latter, as they become accustomed to this almost daily excitement. In the language of the road, the coach-horse's stomach is the measure of his corn—he is fed *ad libitum*.* The effect of this is that he soon gathers flesh, even in this severe work, for there is none more severe while it lasts; and good flesh is no obstacle to speed, but the contrary.

It is not found, however, that (barring contagious diseases) where their owners are good judges of condition, coach-horses are much subject to disease. After a hot

* Some coach-masters give their horses all manger-meat; but this is wrong, as it often produces indigestion and disease. A certain portion of long hay is necessary.

summer, coach-horses are most liable to derangement ; and the month of October is the worst in the year for them, in consequence of its being their moulting season. Coach-horses, indeed, are certain to sweat four days out of five, which keeps their blood pure, and renders almost unnecessary medicine, of which, in general, they have but a small portion—perhaps less than they should have. It is a mistake, however, that fleshy horses cannot go fast in harness : they are more powerful in draught than thin ones ; and, having only themselves to carry, flesh does not injure their legs, as in riding.

In a fast coach, then, a horse ought not to work more than four days without rest, as he becomes leg-weary, and wears out the sooner ; and he becomes also too highly excited. A horse a mile, reckoning only one side of the ground, is about the proportion. Thus we may suppose that ten horses work the coach up and down a ten-mile stage, which gives eight at work, and two at rest. Every horse, then, rests the fifth day. In slow, heavy work, however, coach-horses will do their ground every day, barring accidents or illness.

In slow work, the average duration of coaching stock may be from six to seven years, provided they are at first fresh, and firm on their legs. In fast work, their time may be from three to four years, or scarcely perhaps so much.

Coach proprietors on a large scale should have a break for their young horses, previous to going into regular work. The practice of putting a young horse unaccustomed to

harness into a coach laden with passengers is most reprehensible ; and when injury is sustained by it, it should be visited by the severest penalties the law can inflict.

HARNESS.

In the manufacture of harness we have arrived at a degree of perfection, to which the invention of the patent shining leather has mainly contributed. A handsome horse well harnessed is a noble sight ; yet in no country, except England, is the art of putting a horse into harness at all understood. If, however, our road horses were put to their coaches in the loose awkward fashion of the continental people, we could not travel at the rate we do. It is the command given over the coach-horse that enables us to do it.

In regard to mails, it should be observed, that the proprietors who horse them are not sufficiently attentive to the state of the harness on the ground worked by night ; whereas it should in reality be the best. If anything break by daylight, it is instantly observed ; but it is not so in the night, as lamp-light is uncertain and treacherous.

In speaking of particulars, it may be observed, that bearing reins are a relief to the arm of the driver, and to the horse himself in a long journey.

When a wheel-horse has the habit of throwing up his head, which greatly annoys the mouth of the leader before him, a nose martingale should be used.

In all kinds of work, a tool-box is a necessary appendage

to the coach. It should contain a strong screw-wrench, wheel and spring clips, a spring shackle or two, with bolts and nuts, and two chains—one for a trace, and the other shorter, with a ring at one end and hook at the other, in case of a tug giving way. In his pocket, the coachman should have a short strap with a buckle at each end, as in case of almost any part of the reins, or indeed most parts of the harness breaking, it comes into use in a moment.

RELATIVE PLACES OF HORSES.

In placing horses in a team, we speak of near and off horses. The term “near” is probably a borrowed one. In a waggon, the near horse is the one which is nearest the driver, who always walks with the horses to his right hand; and the other, running abreast of him, is called the off or far horse, because he is farthest from the driver. This term indeed does not refer to coaching so well as to waggoning, as the coachman does not walk by the side of his horses; but many of the terms of coachmanship are drawn from the same source, and the expression “near” horse seems to be among the number.

The word “near” having been thus made use of in its original acceptation, has, in some counties, gradually superseded the word left, in contradistinction to right; as we hear occasionally of “the near side of the road,” “the near wheel of a carriage,” “the near leg of a horse;” in short, it is substituted provincially for the word left.

Or the term may have arisen intermediately from this:

that on the first introduction of carriages into this country there was no driving on the box, but on the saddle, and that thence the term "near" was used to distinguish the saddle-horse, and the term "off," of course, the other horse. These terms were afterwards applied to the road, where, in meeting carriages, according to the adage, "If you go to the left, you are sure to go right;—if you go to the right, you are wrong."

Wheel-horses have the hardest place, as they are at work up hill and down. Nevertheless, if favour be shewn, it must be to the leaders, because a tired wheeler may be dragged home; but, in the road phrase, if a leader cuts it, you are planted. It is a rule always to put the freest leader on the near side, as he is better in hand than on the other. If a leader be weak, and cannot take his bar, the wheeler that follows him must be tied up, and this will place him by the side of his partner. Leaders should be fast trotters for fast coaches; for, if they gallop, the bars are never at rest, and consequently much of the draught is lost in the angles described.

To a coach-horse in fast work, wind is almost as essential as to a hunter. Many high-blowers, however, keep their time very well, with a little attention on the part of the driver. If he see them distressed, he ought to keep them off their collar, and let them only carry their harness for a hundred yards or so, when they will recover, if their condition be good. They work best as night horses; and, if driven in the heat of the sun, they ought to be out of the throat-lash. Indeed, a leader should never be throat-lashed in very hot weather, if he can be driven without it.

Many horses pull, and are unpleasant in it, but go temperately out of it.

In coach-horses, temper is much to be regarded. Some contend that a horse should never know his place,—should go either wheeler or leader, and on either side. If, however, a horse working constantly in a coach prefer any place, he should have it, and he will generally pay for the indulgence. Some horses indeed care not where they are put—working equally well or ill in all places.

As to the mode of putting young horses in harness, the best way is to put one, for the first time, with only one other, which ought to be steady, good-collared, and quick. A great deal of room should be given his head, and he should be driven at the cheek of an easy bit, with his pole-piece rather slack.

There is great want of judgment in throat-lashing a young horse—either wheeler or leader.

Many horses go perfectly quiet as leaders, that would never go as wheelers, because they will not bear being confined by the pole-piece.

All horses ought to have their sides frequently changed, particularly young ones.

As to horses' mouths, some will not bear a curb-chain at all, while the bars and chins of others are so hard, that it is difficult to make an impression upon them; the latter being most prevalent.

It is difficult, however, to handle a coach-horse, particularly a leader, whose mouth is very tender. A snaffle is not safe, as, in case of his dropping or bolting, it has not sufficient power to catch him up quickly, at such distance

from the driver's hand. For a gig-horse, it may occasionally answer. The usual plan then is to "cheek him," as it is technically called, that is, to put his coupling rein to the cheek instead of the bottom of the bit. Should this be severe for him, and he swing his head too much towards his partner, his draught-rein should be put down to the bit, which will bring him straight. He should have liberty in his bearing-rein, and his curb-chain should not be tight. A check-rein to a nose martingale is often of service in this case, as it keeps his head steady, and makes him face his work. Such horses in general work more pleasantly out of the throat-lash.

Horses with very hard mouths require the bit with double port, the Chiffney bit, or the plan of putting the curb-chain over the tongue instead of under the chin, which in some prevents what is termed a dead mouth. Letting out the head of the bridle in the middle of a stage, has also considerable effect, as causing the bit and curb-chain to take hold in a fresh place. A check-rein likewise is sometimes put to the middle link of the curb-chain, to retain the bit in the middle of the mouth, and to keep it alive, as it is termed.

In hard pullers, moreover, putting the bearing-rein to the *top*, and the coupling-rein to the lowest loop in the bit, creates a counter-action, not only making the bit more severe, but keeping the mouth in play. A hard puller is generally safest, and more in place before the bars than at wheel; for, with a good pair of wheel-horses, leaders are soon checked, and he pulls less with a free than with a slack partner.

A coach-horse, if obedient to the hand, cannot well carry his head too high, while a horse that goes with his head down has a mean appearance in harness. The horse, however, that carries his head higher than his partner, should have his coupling-rein uppermost.

A coach-horse should not be broken in a fast coach, as in fast work there is no time to try his temper, and to humour him. By being put at first into quick work, many horses get a habit of cantering, and never trot well afterwards.

A kicking wheel-horse should be put on the near side, where he is less liable to be touched by anything that might annoy him; for, on the off side, throwing the reins on his back, or touching his tail when getting anything out of the boot, may set him off, and cause mischief.—A kicking leader should have a ring on the reins, for many accidents arise by a leader's getting a rein under his tail, owing to the want of this. With first-rate coachmen, however, this precaution is the less essential that they generally have their horses better in hand.

With horses very fresh in condition, it sometimes happens, especially in a turn, that a wheeler kicks over his trace, and an accident is sometimes the consequence. A light hip-strap prevents this, by taking the trace up with him when he rises. In London, this is particularly useful; for, when horses are turning short, or in a crowd, they frequently have their traces slack, and therefore more easily kicked over. The hip-strap looks slow, but it is safe.

COACHMEN.

Of late years, a superior class of men form our coachmen ; and for this we are mainly indebted, first, to the driving-clubs, and the notice taken of coachmen by men of fortune ; and secondly, to the boxes being placed on springs. The latter renders it a common practice for passengers to pay an extra shilling for the box-place, whereas formerly a man would have given something to be any where else.

We are told that good coachmen are becoming, in proportion to their number, more scarce every year, because, owing to the fine state of the roads, the condition of the cattle, and the improved method of road-work, coach-horses are so above their work, that the assistance of the driver is seldom required. When in town, says a writer in the "Sporting Magazine," I sometimes take a peep at the mails coming up to the Gloucester Coffee-house; and such a set of spoons are, I should hope, difficult to be found: they are all legs and wings; not one of them has his horses in hand; and they sit on their boxes—as if they were sitting on something else.

Certain it is that coach-work in perfection is not to be seen a hundred miles from the metropolis—seldom so far. Tho build of coaches, the manufacture of harness, and the stamp and condition of horses, are greatly inferior in the northern counties; and as to the coachmen, few that at all deserve the appellation.

There are few things in which knowledge of an art without execution is of less value than in driving four-in-hand ;

for, although a coachman may have knowledge, it is possible that, from natural awkwardness, he may be unable to put it into practical effect with a neat and appropriate movement of his arms and hands; and seldom is a certain propriety and neatness more required than in handling the reins and whip.

To make a man a good driver, there is one requisite, and that is, what are called on the road "hands"—a nice faculty of touch. No man with a hard heavy hand can ever make a good horseman or driver. Neither will a nervous man ever be safe on a coach-box, for presence of mind and strong nerve are there very often called into action.

The air and manner of a coachman have been cleverly described by some periodical writers. Let us, say they, suppose the horses put to their coach, all ready for a start—the reins thrown across the off wheel-horse's loins, with the ends hanging upon the middle terret of his pad, and the whip thrown across the backs of the wheelers.—The coachman makes his appearance. If he be a coachman, a judge will immediately perceive it; for, as a certain philosopher observes, 'every situation in life serves for formation of character,' and none more so than a coachman's. I was going to say—only let a judge see him come out of his office, pulling on his glove; but this I will say—let one see him walk round his horses, alter a coupling-rein, take up his whip and reins, and mount his box, and he will at once pronounce him a neat, or an awkward one.—The moment he has got his seat and made his start, you are struck with the perfect mastership of his art—the hand

just over his left thigh, the arm without constraint, steady, and with a holding command, that keeps his horses like clock-work, yet, to a superficial observer, with reins quite loose. So firm and compact is he, that you seldom observe any shifting, except perhaps to take a shorter purchase for a run down hill, which he accomplishes with confidence and skill untinctured with imprudence.

In a coachman, temper is also one of the essentials to a good workman.—We are told of a great artist, that, having four “rum ones” to deal with, and being unable to make them work to please him, he threw the reins on the foot-board, and exclaimed, “Now, d—n your eyes, divide it among you, for I will be troubled with you no longer.”

The impertinences of passengers sometimes increase this irritability. In steam-vessels, they adopt the plan of writing in large letters on the wheel which directs the helm, “Do not talk to the helmsman.” It would be as well in some coaches to have the same rule adopted—“Do not babble to the coachman.”

It is not possible to obtain a better idea of a good coachman than from the following account of one who is said to be “the first coachman in England for bad horses.” Having all his life had moderate horses—some strong and heavy, some light and bloodlike, old hunters, old posters,—most of the teams going and returning,—their work at the utmost stretch, always overpowering,—having also had always, besides difference in character, weak horses to nurse,—this ordeal has worn him down to a pattern of patience. With these, and great weight upon severe ground, he is steady, easy, very economical in thong and cord, very light-handed,

and sometimes even playful.—I observed him closely, and discovered from his remarks, as well as from what I saw, that his great secret of keeping his nags in anything like condition, and preserving them when apparently worn out, is by putting them properly together, by constantly shifting their situations, and by the use of check reins with remarkable judgment—by which means he brings their powers as near to equality as possible, besides preventing the evil of boring. Indeed, his horses all go light and airy; and though at times his hold of necessity becomes powerful, yet, generally speaking, he takes his load without a severe strain upon his arms.—I own it is this particular knack which always wins me. Both in driving and riding, give me the man who can accomplish his object with a light hand.”

The duty of a coachman is apt to injure the eyes—particularly in cold blowing weather. He must keep his eye forward; and it is found that the sight cannot be fixed upon any thing beyond the head of the wheel-horses (not so far as this in short men) without raising the eyelids, and consequently exposing the eyes to the weather.

Six parts of cold spring water to one of brandy, is a good lotion when the eyes suffer from this cause. Coachmen should also preserve their feet and bodies from cold. In very cold weather, the chin should be protected by a shawl, and the knees by thick cloth knee-caps. In very severe weather, the breast should be protected; for which purpose hareskins are now manufactured, and are getting into use on the road.

A coachman ought not to drive more than seventy miles

a day ; and, if this be done at two starts, so much the better. The wearing of the frame, under daily excitement, must tend to produce premature old age, and to shorten life ; and this excitement must be very considerable when a man drives a fast coach eighty or a hundred miles a day without a stop—particularly if his coach be strongly opposed.

Coachmen who wish to keep themselves light, take walking exercise in their hours of rest from road-work.

As to amateur coachmen, it has been observed, that if a diet were formed, before whom gentlemen-coachmen were to be examined previous to their being considered safe, it would not be amiss if they were put to the test of having the harness of four horses taken to pieces—strap from strap, and then requested to put it together again in the presence of the judges. There would be no hesitation in pronouncing him safe who succeeded in this, as his experience on the road must have been considerable.

How these amateurs are trusted with the reins coachmen are now obliged to be careful, owing to the speed of coaches, and the improved breed and condition of coach-horses. Hence, we see fewer amateurs at work than formerly. It would indeed be highly culpable in a coachman to trust the lives of passengers and his master's property to any one whom he did not know to be safe, or even without reflecting that a man may be a very safe coachman with horses he knows, and a very unsafe one on some roads with horses to which he is a stranger.

To gentlemen who wish to drive, and are really capable of doing so, the following is recommended as not a very bad way of doing business :—“ When travelling with a

coachman I do not know," says an amateur, "I always adopt the following plan—that is, if I wish to work. In the first place, I never got upon a coach-box yet with anything like half-pay about me; such as a black handkerchief around my neck, or in blue pantaloons; neither do I think I ever shall. I always take care to have a good deal of the drag about me:—a neat pair of boots, and knee-caps, if cold weather; a good drab surtout—if not a poodle; a benjamin or two about the coach, and a little of the spot about the neck. For the first mile, I always observe a strict silence, unless broken by coachee; but at this time he generally runs mute. He is perhaps but just awake, or is considering about his way-bill—reckoning his passengers, thinking what he has to do on the road, and, if a workman, looking over his team to see if all is right. Leave him alone for a short time, and when his mind is at ease, he will look you over as you sit beside him. He will begin with your boots, proceeding upwards to the crown of your hat, and if he like you, and you make a remark or two that pleases him, and shews you to be a judge of the art, the first time he stops he will say—"Now, sir, have you got your driving gloves on? would you like to take 'em?"—I am here alluding to country work, and not to the roads near London.

Coachmen's expenses on the road being heavy, should be taken into consideration by passengers. They have their horse-keepers to pay every week, or they will not do their best for them; and the wear and tear of their clothes is a heavy tax on their pockets. They are satisfied, however, with one shilling under, and two shillings for anything over, thirty miles; and they are well entitled to that

sum—more especially when we recollect that they are liable to have empty coaches. No man, certainly, should give them less than a shilling, and if he often travel the same road, his money is not ill-bestowed. In respectable coaches, no great difference is now made between the fees given by in and outside passengers, as it often happens that the latter are best able to pay.

Guards on mail coaches are necessary appendages to the establishment; and, that they may be equal to their duty, they go only moderate distances—as from sixty to eighty miles, when they are relieved by others.—Those on the long stages, however, are imposed upon by their masters; and, by being made to do more than they are equal to—many of them two nights up for one in bed, are half their time asleep. Some go from London to Exeter, Shrewsbury, and other places equally distant, without stopping more than three quarters of an hour on the road, which, in bad weather, is hard enough. Indeed, it is wonderful how with their means they always contrive to live.

Guards are by no means useless appendages to stage coaches; for no coach, running a long distance and in the night, should be without one; but such guards should be provided with fire-arms in good repair. Setting aside the idea of highway robbery, it is impossible that, in the night, a coachman can see to the luggage on his coach,—nor indeed, can the guard, if he be asleep, and asleep he must be great part of his time, if worked in the way above stated. He should not go more than one hundred miles, and he should be paid by the proprietors.—But if the public should not be left to pay an armed guard, it is monstrous that they should pay an unarmed one.

As to mail-guards, government allows them only a mere pittance of a few shillings a week, leaving the public to pay them ; whereas the public have nothing to do with them, and it is the most impudent imposition that these servants of government should be paid by persons travelling. That they carry fire-arms is true ; but it is to protect the letter-bags—property which government is paid to protect—that they would use these arms, and not on account of passengers. Strictly speaking, they have nothing to do with the passengers, nor their luggage ; their sole duty being to protect the mail. As therefore government is paid for carrying the mails, government, and not the public, should pay the persons who actually do protect them.

MOUNTING AND DISMOUNTING.

Before getting upon the box, a coachman should walk round his horses' heads, to see that his curb-chains and coupling-reins are right, and, above all, that the tongues of his billet-buckles are secure in their holes. Many accidents have arisen from the want of this precaution. No man is a safe coachman who does not see to these things.

Of mounting and dismounting, there is nothing particular to be said ; except that, in the former, the reins are of course to be taken in the left hand, as they are afterwards to be held in driving.

THE SEAT.

The driver should sit in the middle of the box, quite straight towards his horses, rather upright or backward than forward, with his knees nearly straight, and with his feet together, toward the edge of the footboard. With the exception of a pliant motion of his loins, on any jolting of the coach, his body should be quite at rest, and particularly so when he hits a horse.

Independently of appearance, a firm seat on a box is very necessary for safety to a coachman and his passengers, for a trifle will otherwise displace him.

THE REIN-HOLD.

As driving depends still more exclusively than riding on the mode of holding and managing the reins, and differs from it chiefly in that respect, this requires the first and greatest attention.

THE REINS FOR ONE HORSE may be held in the same manner as in riding with snaffle reins alone, namely, entering the hand under and over the little finger, and passing out between the fore-finger and thumb; the whip being held in the right hand.

THE REINS FOR TWO HORSES, *when these are properly broke and well matched*, may be held in the same manner as in riding, or as just described in driving one horse.

When, however, horses are not well broke, or are ill matched, the off rein may enter above and the near rein below the fore-finger, and both hang down through the hands, of

which the back is turned slightly downward. This greatly facilitates the guidance and adjustment of the reins.—(Plate XLIV. Figure 1).—In this case, the whip is held with the third and fourth fingers and thumb of the right hand; and the first and second fingers of that hand are used to pull in any rein which may require it.—(Plate XLIV. Figure 2).

THE REINS FOR FOUR HORSES are in general best held in the latter way—so far as it goes, on account of the facilities of guidance and adjustment which it bestows. In this case, the off rein of the leaders is held between the first finger and thumb; the near one, between the first and second fingers; the off rein of the wheelers also between the first and second fingers, but under the former; and the near rein of the wheelers, between the third and fourth fingers. The whip is of course held as in the latter case of driving a pair of horses.—(Plate XLIV. Figure 3).

Perhaps in all cases, this latter mode of holding the reins is preferable; but the reader, being now informed of every mode of holding the reins, may vary this according to circumstances.

It is seldom we meet with a coachman who drives with what is called a full hand. In this case, every rein passes singly through the fingers.

With long wheel reins, there is one advantage in this method—a wheeler's rein is not covered by a leader's; but this is generally thought to be more than counter-balanced by the comparatively trifling power a man has in his little finger, which must chiefly manage the other leader's rein.

In holding the reins, as little motion of the arm should be observed as possible, and they should be shifted, when necessary, with the gentlest motion, and apparently with no difficulty.

When four horses are to be restrained at once, most coachmen draw all the reins through their fingers at the same time; and here the horses' mouths are lost. The coachman should change hands by opening the fingers of the right hand and putting the reins into them, about two inches before his left hand, and should then take them up again with his left, by passing it beyond his right. By this means the horses' mouths are not lost.

The correspondence and the guidance have already been more amply detailed under "Riding," than is necessary for the purpose of driving.

STARTING.

Before starting, four horses should *stand clear*, or at their proper length from each other.

Horses should have some notice—a click, or a whistle—given them to move.

If the whip is used, *the wheelers should be touched, and generally the ablest horses.*

As it is with coach-horses as with mankind—that the physical strength is in the governed, they must be humoured a little. When starting, the coachman must not pull at their heads, but must feel their mouths lightly

or they may bolt, throw themselves down, or break through their harness.

If horses are old, and the stage commences with a descent, they should be allowed to go a couple of hundred yards before they are put to their usual pace.

A young horse should be started very quietly, making the old horse take collar first. This is especially necessary if the young one is inclined to be hot, as it will prevent his plunging.

The young horse's first time of starting should be in a wide space, so that it may be any way he pleases, without a check. If he be alarmed, and inclined to bounce, he should not be held hard, and still less stopped; for, if so, he may not like, particularly if high mettled, to start again. The old horse will prevent his running far.

If a young horse be shy of his collar, he should not at first be pressed to it; as he may thereby take a dislike to it, and become a jibber.

A young horse, when first put to a coach, should be turned to the pole very carefully, to prevent its touching his hind quarter, which might make him kick.

When he has been driven long enough to be steady, he should be taken up in his bearing rein, put down lower on his bit, and driven in a wide circle, or figure eight—keeping the inner horse well up to his collar and bit.

In breaking, he should be frequently stopped, but not held after being pulled up, as, if high mettled, it will make him restless, and if dull, he does not require it.

If, on the contrary, a young horse is heavy, and not ready to start when the command is given, he should be whipped till he answer it.

THE PACES.

These, in driving, must always be a WALK or a TROT—*never a canter*, which, owing to the draft, would be equally injurious to the horse and to the carriage.

Either of *these paces*, moreover, should be suited to the nature of the road. Rapid driving, on the stones especially, exposes a carriage to injury, both from shocks against others, and from those which attend its own motion.

Rapid driving, however, is sometimes for a moment necessary, in order to get out of the way of carts, waggons, &c.

In public coaches, the pace is often too rapid; and, should any passenger plead for the horses, on the score of the excessive heat, the coachman, with the utmost sang froid, replies that he must keep his time, although the probability sometimes is, that one or more of them may drop, by which considerable time would be lost, as well as reduction in force ensue for the rest of the stage.

Horses should be more frequently watered during hot weather than they generally are: increased perspiration renders it necessary.

However well pleased thoughtless people may be at going at an accelerated rate, it is certainly hard that other passengers should be obliged to hazard their existence at

the pleasure of a reckless driver, who, in answer to all remonstrance, coolly answers, he must "keep his time." Something should certainly be done to prevent the cantering system; for no coach, be it ever so well built, can preserve its equilibrium so well when the horses are in the canter or gallop, as when in the trot.

At the same time, it is to be borne in mind, that, at the rate our coaches now travel, some slight degree of it may sometimes be unavoidable, owing to horses trotting so variably, and its being very difficult to obtain teams every individual of which shall be able to trot through the distance at the required rate.

In driving four-in-hand, it is not every man who knows when a coach-horse is at work; as a horse may keep a tight trace, and yet be doing little. There is, however, an increased tension of the horse's frame when taking weight with him, which is the surest test, and which never escapes a quick and experienced eye.

As already observed, those called lobbing-goers take greater weight with them than horses of finer action, provided they are equally close workers.—Heavy draught shortens the stride of horses, after they have been a few years at work.

THE TIME.

In short distances, to know precisely *at what time it is necessary to start, to arrive at any place at a certain hour*, the driver has only to ascertain the distance, and to regulate the pace by the following table.

4 miles an hour 1 mile in 15 minutes.

5	ditto	12
6	ditto	10
7	ditto	8½
8	ditto	7½
9	ditto	6
10	ditto	6.

In the streets of London, 10 minutes at least, in every hour, must be allowed for stoppages.

THE WHIP.

“We are too apt,” said the late Lord Erskine, “to consider animals under the domination of man in no view but that of property. We should never forget, that the animal over which we exercise our power has all the organs which render it susceptible of pleasure and pain. It sees, it hears, it smells, it tastes, it feels with acuteness. How mercifully, then, ought we to exercise the dominion entrusted to our care?”

Speaking to coach-horses from the box is now considered slow, but it is not without its effect. Whipping, however, is sometimes indispensable.

The manufacture of four-horse whips has arrived at great perfection, and affords employment to many hundred hands.

Refined management of the whip is not of many years birth; and even now there are but few who execute this effectually and with grace.

There are as many ways of whipping coach-horses, says a clever writer in the "Sporting Magazine," as there are horses in the coach; and, as there is a right and a wrong way of doing most things, a young beginner may observe the following directions — beginning with the wheel-horses.

Before a coachman hits a wheel-horse, he should twist his thong three times round the crop of his whip—holding the crop at that moment somewhat horizontally, by which means the thong will twist towards the thin end of the crop—when the thong, being doubled, will not exceed the length of a pair-horse thong, and in some measure resemble it. Its being double, renders it of course more severe, by falling more heavily on the horse; and, by the two ends of the thong not being spread, but close together at the time of the blow, it falls with increased force.

When the off-side wheeler is struck, the coachman's right arm should be put out from his body in the same position in which he presents it to his tailor to measure him for a coat, but the blow should proceed entirely from the wrist. The part on which the horse should be struck is about four inches behind his false belly-band, or somewhere near the short rib on his right side. The stinging part of the blow is then felt under the belly; and, unless a horse is quite beaten, or of a sulky and bad disposition, he seldom fails to answer it. If he do not answer it here, he must be struck before the belly-band, when the blow falls just behind the fore-arm on a part on which the skin is very thin.

In hitting a near-wheeler, the coachman brings his right

hand exactly opposite to his face, and, turning the crop three turns around, as before directed, he lets the thong fall sharply across the horse's loins three times in succession, if he do not answer sooner, observing that, after the third blow, he draws the thong obliquely across the horse's back, by which means his arm returns to a state of rest, and the crop falls gently across his reins, just about his left hand—the crop pointing a little upward to prevent the thong getting under, or touching, the near wheel-horse's tail.

Should the latter be the case, if the driver lower his crop, the thong will almost always get released; but should it not, he must let the thong loose, and draw it out from the point. When it comes up from the tail, let the coachman throw back his crop a little to his right hand, and the point of the thong will fall across his fingers, when he catches it, and puts it back into his hand. It must be observed, that, in striking the near wheel-horse, the wrist only, as in sword exercise, is at work; the body must be quite at rest; and after the whip is brought to bear, the arm must be quiet also, until the third blow is struck.

There is only one other method of hitting a wheel-horse, which is called pointing him. This is done by hitting him with the point of the thong, when loose, just behind his shoulders, but it is not considered neat execution. If there should be a free leader before the bars, it causes him to fret, and is only to be had recourse to in emergencies—as, for instance, in turning round a corner, or into a gateway, when a leader is to be hit, and before the coachman can recover his thong a wheel-horse requires whipping also.

If a wheel-horse shew symptoms of vice, as a disposition to kick, &c., or, in short, if he refuse to answer either of the other calls upon his exertions, a blow with the double thong on his ears generally brings him to his senses. Without great necessity, however, it is very reprehensible to strike a coach-horse over the ears—the parts being very sensible.

It is generally supposed it is in whipping a leader that neatness of execution is more especially displayed. It is, however, quite a mistake to suppose that it is in the power of a coachman to punish a leader with the single, as he can a wheel-horse with the double thong. No doubt, however, the blow from the loose thong falls very sharp, as it falls on a tender part—the inside of the thigh.

As the off-leader presents himself more fully to the right hand of the coachman than his partner does, the horse that is the less free of the two is generally put on that side. There are but two ways of hitting an off-leader: one, by letting the thong fall gently over his neck, or just behind his pad, when his driver merely wishes to refresh his memory, and let him know that he has a whip in his hand; and the other, when he wants to hit him sharply, by striking him with the point of the thong just under his bar. The hard hitters of the old school never conceived they had done the latter effectually, unless they struck their horse twice at least, if not three times,—the last stroke always ending in a draw.

As this word “draw” is peculiar to the road, it must be explained to such as may not exactly comprehend it. Suppose a coachman to hit his off-leader three times. The

two first blows are given, as it were, underhanded—that is to say, the hand is lowered so as to admit of the thong going under the bar the first two strokes. When the third or last is given, the point of the elbow is thrown outwards, so as to incline the thong inwards, which brings it up to the coachman's hand after the stroke—it generally falling across his breast, which would not be the case were it not for the draw. Another advantage also attends the draw: a thong so thrown very seldom hangs in the bars, and nothing is more uncoachman-like than to hit a leader above his bar. A horse's mouth should always be felt before his coachman hits him.

Hitting the near-leader with neatness and effect is the most difficult part of the use of the whip. There are two ways of doing it: one, by two common strokes and the draw; and the other by a sort of back-handed stroke, which is a very neat one, and sufficiently severe, but it does not bring the thong so immediately up to the coachman's hand as the drawn stroke does. In the back-handed stroke, the wrist describes an exact figure eight, and the arm cannot be kept, as before, quite still. In the other method of hitting, the coachman's arm is brought about opposite his chin, the two first blows proceeding from the wrist alone; but, in the third, or the draw, the hand descends, the elbow is thrown outwards, and by two jerks of the arm, which it is difficult to describe on paper, the draw is effected, and the thong comes, as before stated, across the coachman's breast, so as to enable him to catch it instantly.

There is one other way of hitting a leader; and that is,

by what is called the chop. This is done by throwing out the right arm rather forward, and with it, of course, the thong, and then bringing it back sharply with the wrist inclined downwards. The thong falls severely on the horse's thigh, and comes up to the hand again, as in the draw. This is a very useful blow in a narrow confined place, or when it is necessary to lose no time before a leader is hit; and, when neatly done, has a very workman-like appearance. This blow generally falls above the bar—particularly if a horse is not at work at the time.

It has been said that leaders should always be hit above their bar. This, however, cannot always be done; for if a horse hang back from his collar, his bar is so low that it may be difficult to get under it. In this case, however, the blow is made to tell smartly, as it is in the coachman's power to throw his whip into the flank, which is a very sensible part. When a leader is well up to his collar, he always can, and always should be, hit under his bar.

Should the point of the thong catch, or, as they say on the road, "get hanged," in the bars or the pole-pieces—neither of which it will do when properly drawn after the last stroke, as the inclination of the hand in the act of drawing enables it to clear them—no violence should be used to loosen it, or a broken crop will be the consequence. On the contrary, the arm should be thrown forward, and the thong lightly moved, when in a minute or two it will shake out. Should it be fast between the eye of the main bar and the pole-hook, the leaders should be eased a little, and it will get released. Sometimes, however, on a wet day, a thong will lap round some of these things so

fast, as to make it necessary for the guard or some person to get down to untie it. This is technically called having a bite. The double thong will also sometimes hitch in the ends of the wheelers' traces, as also in the point of the false belly-band. To obviate this, in gentlemen's harness, these parts are always covered, or piped, as it is called.

A free leader should not be hit in a short turn, or he may break his bar, perhaps the pole-hook, or even the main-bar. Neither should leaders be hit in going over a small bridge which is much raised, or when the pole points upwards, as their draught on the end of it may snap it in the futchels.

Some drivers perpetually whip or fan their horses, which first irritates, and afterwards injures them, by rendering them insensible to the proper aids or correction. It must be observed, that the whip should never be used but in case of necessity. Indeed, one of the best proofs of a good coachman is to see his right arm still; and although, for the safety of his coach, he ought to be able to punish a horse when he requires punishment, yet he should, on all accounts, be as sparing of it as he can. Horses may be whipped till they become callous to whipping, and therefore slow. In the condition in which coach-horses are now kept, a pound of Nottingham whipcord will last a good coachman his lifetime. The very act of throwing the point of the thong over the leaders' heads, or letting it fall on their backs, as a fisherman throws his fly upon the stream, will set half the coach-horses in England, in these days, into a gallop.

THOROUGHFARES, PASSING, ETC.

The driver should avoid passing through the great thoroughfares, and prefer the widest of the less frequented streets which run parallel to them.

In London, he should never go into the City through the Strand, Fleet-street, and Cheapside, between twelve and five o'clock, if he can possibly avoid it, as these streets are then crowded with every kind of vehicle.

He should also avoid going into the City about midday, on Mondays and Fridays, on account of the droves of oxen passing through the principal streets.

The middle of the road is safest, especially for a loaded coach—except under peculiar circumstances.

In driving four horses, to keep them well in hand is a most material point, both as regards their work, and for the safety of the coach. The track made by a coach in descending a hill shews whether horses are properly held together or not. Accidents from horses taking fright, and bolting across the road, happen only to clumsy fellows, of whom the list is considerable.

The rules for passing and meeting carriages on the road have already been given, yet there are times when they need not be strictly adhered to, and a little accommodation becomes expedient. Thus, if one coachman has the hill in his favour—that is, if he be going down, and a loaded coach be coming up at the same time -- he who is descending, if he can do it with safety, ought to give the hardest side of the road to the other coachman.

As to narrow spaces, it is evident that where the bars can go the coach can go, as they are wider than the wheels; and consequently, if they are cleared, all is safe. The swing-bar is an excellent invention, as a horse works in it from either shoulder, and therefore quite at his ease.

A sharp and experienced driver may calculate exactly the space sufficient to pass between two bodies at rest, and may therefore pass with confidence and at his ease.

As, however, in streets, he must meet many carriages driven by inexperienced or intoxicated fellows, who do not for a moment move in any direct line, he must allow them ample room, and proceed *with the utmost caution*.

A driver must, therefore, be incessantly on the look-out, must watch every vehicle that approaches, and *must give it more room than it may seem to require*.

ASCENDING AND DESCENDING.

IN GOING UP HILL, it is in general *best to trot up at first, and to walk afterwards*.

IN GOING DOWN HILL, *it is best to keep the wheelers tight in hand, to let the leaders just clear the bars, and to come gently down*.

In the latter case, a turn of the reins of the wheel-horses may be made round the little finger.—(Plate XIV. Figure 4.)

Although, however, it may be necessary to catch up wheel-horses, and make them hold back their coach down hill, there is nothing in which a light finger is more essential to safety. The manner in which some persons haul at

horses' mouths when descending with a load considerably adds to the difficulty, by trying the strength of the tackle. But this is not all : these persons should be aware that all this force employed on their horses' mouths is so much added to the pressure of the coach : in proportion to it is that pressure increased. The horses are then drawing by their heads !

The objections to a locked wheel, with a top-heavy load, have already been stated. If, however, with a heavy load, and upon a smooth hard road, a wheel must be locked, it should be that next a ditch, or other dangerous part. In going down hill, a coach always strikes on the side on which the wheel is not locked. The coachman should therefore keep as much as possible on that side of the road on which the wheel is locked : by crossing the road, if he meet, or have to pass, any thing, the coach will not strike ; and by holding that way, at any time, it will prevent overturning. The coach naturally strikes in a direct line from the perch-bolt.

The generality of passengers know not the danger of galloping a coach with three tons weight in and out, down hill, at the rate of twelve or fifteen miles an hour, with no wheel locked, the whole resistance of the wheel-horses depending on a small leather strap and buckle at the top of the hames—these coachmen deeming it beneath their dignity to drive with breechings. Even thus, however, accidents would be much less frequent, if coachmen took the precaution of pulling up their horses short when on the point of descending. In night-work, this is doubly useful, because it often happens that a pole-chain is unhooked, or

a hame-strap gets loose, without being discernible by lamp or moonlight.

“With wheel horses that will hold back at all, I will be hound,” says a clever writer and experienced coachman, “to take a loaded coach down most of the hills now met with on our great roads, without a drag-chain, provided I am allowed to pull up my horses at the top, and let them take it quietly the first hundred yards. This, it may be said, would be losing time; but, on the contrary, time would be gained by it; for as soon as I perceived I was master of my coach, I should let her go, and by letting my horses loose at the bottom, I could spring them into a gallop, and cheat them out of half the hill, if there were one (as frequently happens) on the next portion of road. This advantage, it must be recollected, cannot be taken, if the chain be to be put on; and I have therefore in my favour all the time required to put that chain on, and to take it off again.”

There are, however, some horses which no man can make to hold a loaded coach down hill. Of this description are, first, the stiff-necked one, as he is called, who turns his head away from his partner, and shoulders the pole; and, secondly, one who, when he feels the weight pressing upon him, begins to canter or jump, as coachmen term it; when holding back properly is out of the question. With such cattle, the drag-chain must be had recourse to; as well as when there is the least reason to suspect the soundness of the harness.

All this confirms the necessity of checking the force of a coach before descending a steep hill, and indeed in some

cases—as with bad holders—before coming upon a slight descent. The term which coachmen have for this species of road, is “pushing ground ;” and if the fall be long, it is astonishing how the pressure of a loaded coach upon wheel-horses is increased before getting to the bottom of it, and how difficult it would be, with wheelers not of the very best stamp, to pull up short, if any accident should happen.

Young coachmen, in descending a hill, should take care that their leaders do not draw on the end of the pole, which many free ones do when they find the coach coming quickly after them ; for this not only increases the pressure of the coach on the wheelers, but, should either of them stumble, it must assist in bringing him down.

The following good and characteristic directions were given by a very experienced coachman, to a gentleman who undertook to take his coach a journey for him, but who, although he knew the road well, had never driven on it before. “That middle twelve miles of ground,” said he, “is a punisher, and you must mind what you are at with this load. You have two hills to go down, and three to go up, in the first seven miles. Don’t stop to put the chain on, as they’ll hold well, and the tackle is good ; and don’t let them walk up the hills, for they are bad hands at that—you will lose a horse’s draught by it, and perhaps get hung up on one of them. You must take fifty minutes to do the first seven miles, and good work too. When you get to the top of the last hill, get down and put your near leader to the cheek, and they’ll toddle you over the last five miles in half an hour with all the pleasure alive.”

THE TURNINGS.

These must be regulated by the ground.

A good driver avoids all sharp and quick turnings. In town, it is much better to drive on a little further, where another street may allow the *ample room requisite in turning*.

If a carriage do not pass quite *across a channel* without turning, the perch must be twisted according to the descent, because one wheel falls as that at the opposite angle rises. By such a wrench, especially when going fast, the main or perch bolt is frequently broken, and every part strained.

A loaded coach should never be turned short, even at a slow pace, for the coach is never safe when there is not an even bearing on the transom beds. If turned short, at a quick pace, the higher and looser part of a coach must go over, because all bodies put in motion by one power will proceed in a straight line, unless compelled to change their course by some force impressed. Hence a horse at full speed is with difficulty turned to right or left; and, if he turn suddenly, and of his own accord, he puts his rider's horsemanship to the test. So with a coach, a sudden turn to one side the road allows the body to swag towards the other, and the centre of gravity is lost.

In a turn, a coachman must point his leaders well, that is, take proper ground for them to make the turn, and let his wheelers follow them. Moreover, as wheel-horses are always in haste to make the turn, the driver must shoot them out on the opposite side, just as he has pointed his leaders. Thus, if the turn be to the right, he must catch



up his near wheel rein, and hit his off wheel-horse; and *vice versá.*” This will keep the head of the pole (which he should have his eye upon) just between the leaders, and the wheelers will follow, as if they were running on a straight road. This will also secure him against danger, by clearing his coach of posts, gutters, &c. No man can make a neat turn with four horses, unless he shoot his wheelers, at the same time that he points his leaders.

In turning, *the wheelers must rather be kept up, and the leaders be tight in hand, to avoid the corner;* for, if the wheelers flag, and the leaders draw, the carriage *must* be brought against it.

THE RANKS IN TOWN.

These must *never* be broken, either in driving through crowded streets, or in setting down at crowded places.

As to admitting others into the rank, every driver should do as he would be done by.

STOPS.

It is a good plan to use horses to-stop by notice, as it may prevent accident.

In pulling up, the driver must *pull the reins equally, but rather those of the wheelers first.*

When a young coach-horse is stopped, it should be very gradually—allowing at least ten yards to do it in; for if it be attempted to stop him short, he will resist.

A careful driver will never keep his carriage standing in a great thoroughfare.

When obliged to stop in a crowded street, the driver should, if possible, avoid the spot where another carriage is stopping; should choose as much as possible the widest part of the streets; and should draw up his wheels close to the curb.

When a rider gets out of a close carriage, he should always shut the door, to prevent its swinging about, the hinges being strained, or the panels getting a blow against posts, &c.

There is no part of stage-coach economy in which greater alteration has been made than in changing horses. Unless business is to be transacted—as taking fares for passengers, setting down, getting out parcels, &c.—the average with fast coaches is three minutes for each change.

ACCIDENTS, ETC. TO HORSES.

A cantering leader, or one that frets, is generally mismanaged by young coachmen. They are apt to pull him back, and endeavour to get him to trot, by the bit, which generally fails, or makes him even worse, by bringing him back on his bar. The right way is to pull him back by his harness; that is, to keep the wheelers back, so that he may feel his collar and bit at the same time.

A horse that kicks ought to be taken very short in his pole-piece, and gagged; and, when he begins to kick, he should be whipped on the ears—a punishment which should never be inflicted but for vice.—Hallooing to a horse when he kicks has sometimes an effect.

A hot leader is sometimes benefited by moping. An experienced driver says, "I once bought a capital coach-horse for twenty-six pounds, because no one could drive him; and, as he had broken two carriages, he was the terror of the neighbourhood. I moped him, and could drive him with the greatest safety, either leader, or at wheel."

In the case of a horse falling, a periodical writer, replying to another, says, "in one of his letters on 'the Road,' he says, 'if the coachman be driving with the short wheel rein, and a horse fall beyond recovery, he had better open his hand, and let the reins fall out, than run the risk of being pulled off the box.' With all due deference to such authority, I cannot subscribe to this, as it frequently happens that a horse falls, is dragged along the ground for a short distance, and recovers himself the moment the coach stops, and then starts off at full gallop, the other horses following his example. Now, if coachee has opened his fist, and let the reins tumble out, and the above occurrence should take place, I would certainly rather be on the top of Cheviot than on the top of the said coach, as the catastrophe would not be very difficult to foretell."

On many horses hot weather has a singular effect; and therefore, it often happens that a good winter-horse is an indifferent summer one.

Coach-horses are subject to many accidents, of which one is peculiar to them—namely, fracture of the legs in trotting on level ground. Fractures of the foot in draught horses and others are common; but fractures of the leg in coach-horses when trotting over level ground, are probably

caused by over-tension of the limb in the act of drawing. It is said that a coach-horse's leg is most frequently broken when, with a heavy load behind him, he snatches at his collar in a turn of the road.

They are also subject to an affection known by the appellation of the lick, which greatly injures their condition. In this state, they lick each other's skins, and gnaw their halters to pieces. This probably proceeds from the state of the stomach, caused by the excitement of high feeding and work. It may be removed by opening or alterative medicines.

They are likewise subject to a kind of vertigo, which on the road is called megrims. This, of which the immediate cause is temporary pressure on the brain, is often brought on by running in the face of a hot sun; and therefore horses subject to megrims ought to work at night. The attack appears to come on suddenly, though a snatching motion of the head is sometimes observed to precede it. If not immediately pulled up, the horse thus affected drops. Such horses should have attention paid to the state of their bowels, and have frequent antimonial alteratives. What is called "a megrim horse" is always dangerous, especially near a precipice or ditch, as, when seized, he rolls away from his partner, and of course takes him with him.

ACCIDENTS TO COACHES, ETC.

A necessary precaution in a gig is—never to sit with the feet under the body, but always to have one, if not

both, out before it.—“I had a passenger by the side of me,” says the driver who gives this caution, “who was sitting with his feet under his belly, and who was consequently thrown with much violence into the road. I had five miles further to drive him, during which he took care to have his feet before him.”

In stage-coaches, accidents no doubt occur, and no one will assert that the proprietors guard against them to the utmost of their power. The great competition, however, which they have to encounter, is a strong stimulant to their exertions on this score. In some respects, also, the increase of pace has become the traveller's security: coaches and harness must be of the best quality; horses must be fresh and sound; coachmen of skill and respectability can alone be employed; and to this increased pace is owing the improvement in these men's character. They have not time now for drinking, and they come in collision with a class of persons superior to those who formerly were stage-coach passengers, by whose example it has been impossible for them not to profit. A coachman drunk on his box is now a rarity—a coachman quite sober was, but a few years ago, still more so.

On the whole, however, travelling by public conveyances was never so secure as it is at the present time. Axle-trees and springs do not often break now; and if proprietors go to the expense, their wheels are made secure against coming off.

The worst accidents, however, and those which, with the present structure of coaches, can never be entirely

provided against, arise from broken axle-trees. and wheels coming off on the road. The guard, therefore, in whose department this lies, ought to examine the axle-tree every time it is fresh greased. He should also remove it once in ten days, put a string through the bolt that receives the linch-pin, and hang it up and cleanse it; and he should then strike it with a hammer, when, if uncracked and sound, it will ring like a bell—the coachman attending to take care that it be again properly screwed on.

Reins also break, though rarely, except in those parts which run through the terrets, the rings of the throat-lash, or in the billets; and attention to these would make all safe, as far as accidents from this cause are concerned.

Accidents happen also from want of attention to the security of the bridles. The throat-lash, therefore,—particularly of the wheelers—should be as tight as can be allowed without injuring respiration. There otherwise is always danger of the bridle being pulled off.

Accidents, moreover, happen from galloping coach-horses down hill, or on even ground. If, indeed, an accident then happen, it must be a bad one. The goodness of a road is no preservative against it: on the contrary, it is possible that if a coach begin to swing, it may go over from the very circumstance of the road being so level and so smooth that there is nothing on its surface to hold the wheels to the ground. If, moreover, there be two horses at wheel whose stride in their gallop differs much as to extent, the unequal draught invariably sets the coach rolling, and, unless the pace moderate, the fore-wheel passing even over a small

stone, may, under such circumstances, cause the coach to upset. In respect to lateral motion, however, much depends upon the build of the carriage.

In galloping coach-horses, if the leaders lead off with two legs, the motion of the coach is considerably truer, and the swing-bars are also much more at rest, than when each horse uses the same leg.

It appears, then, that accidents to coaches are chiefly to be attributed either to the want of proper skill and care in the servants employed, or to what is still less pardonable, inattention on the part of their masters.

Road-coachmen, fortunately, are well aware that the law looks sharply after them, and that for neglect proved against them, they are equally answerable to their employers, as these are to the public.

If I were to go upon the road, says an amateur, I would be a night-coachman through a well inhabited country. For six months of the year it is undoubtedly the pleasanter service, and I never found any difference between taking rest by day or by night. It is, however, calculated only for a man in the prime of his days, as all his energies are required.

The night-coachman ought to know his line of road well. He must take rest regularly, or he will be sure to become drowsy, if he do not go to sleep. He must also keep himself sober; keep a tight hand on his horses; keep the middle of the road; and be sure to keep time.

The night-coachman must cast his eye well forward, and get out of the way of carts and waggons in time.

Although, by looking perpendicularly from his box or at

the hedges, if there be any, a coachman may always see if he be in the road, yet if he cannot throw his eye some way before his leaders' heads, he is going at random. He will often get close to things he may meet in the road before he is aware of them; and therefore, as I have already said, it is essential that he should be wide awake, and have his horses well in hand.

Chains and springs on the bars are good things for night-work, as they prevent the leaders' traces coming off.

A narrow road, sufficiently wide, of course, for carriages to pass with convenience—with no ditch on the side—is much the best for night-work.

Unless when the moon is very bright, a dark night is in favour of safe travelling. When it is what coachmen term "a clear dark," the lamps give much better light than when the darkness approaches to grey.

In very wide roads, particularly where there are no hedges to confine them, lamp-light is both weak and deceiving; and moonlight is often glimmering and doubtful, particularly when clouds are passing rapidly.

Lamp-light is treacherous both in fogs, and when horses are going at a moderate pace, with the wind just behind them; for then the steam arising from their bodies follows them, and necessarily obstructs the light.

Sometimes, from driven rain or snow, a coachman can scarcely open his eyes so as to see the road to the extent of the light given by the lamps; in which case a tight hand on the horses is especially necessary.

A heavy fog is the only thing which baffles the skill and intrepidity of our night-coachmen. In this case, lamps are

of no avail as to showing light forward ; and, in the worst cases, the only use that can be made of them is for the guard to hold one in his hand behind the coach, by which he will be able to see whether the horses are in the road or not.

Lamps, however, are always useful in case of accidents ; and, except in very clear moonlight, a night-coach should never travel without them.

Accidents often occur from coachmen neglecting to light their lamps in going into a town. It often happens that, when a coach comes down the road in the morning, there may be no obstruction in the streets ; but rubbish from buildings, stones, or many other things, may be thrown out by the time it comes up again at night.

When an accident happens to a coach, presence of mind is much required. Outside passengers should never think of quitting a coach by jumping from the fore part, at least, until she falls to the ground. From the box, indeed, a man may get over the roof into the guard's seat, and thence descend.

OBSTRUCTIONS, OFFENCES, AND INJURIES.

By the 1st Geo. I. c. 57, drivers of hackney-coaches are to give way to gentlemen's carriages, under a penalty of 10s.

If a carriage be obstructed by disorderly persons, the driver should take out his pocket-book, and let the persons guilty of this see that he is taking a note of their number, and he should then coolly tell them that he will summon them if they do not immediately clear the way.

If a carriage be injured by another running against it, the driver should ascertain whose carriage has done the mischief, and let his coachmaker give an estimate of the charge for repairing it; but, before he has it done, he should let the person who injured it see the mischief, and pay the charge; or, as is the custom, let the repair be made by the coachmaker of the party who committed the injury.

WRESTLING.

WRESTLING IN GENERAL.

Of the principles of wrestling different views have been taken. In England, its rules have been rather restricted. On the continent, they have admitted not only what has here been deemed more or less unfair, but what is positively so, as well as what is unseemly and disgusting.

Mr. Clias has, it seems, introduced some of these practices into our public schools; and the following are the observations of one of their ablest opponents, a clever writer in *Blackwood's Magazine*.

“We have been too long accustomed to the simple, straightforward, manly, close-hugging, back-hold ‘worstle’ of the north of England, to enter into the Captain’s cantrips, and we devoutly wish that we could see himself, or his best scholar, try a fall with any one of fifty of the Cumberland and Westmoreland Society in London.”—“In order to prepare his scholars for wrestling, the most complicated of gymnastics, both with respect to the diversity of its movements, and the different situations in which wrestlers are often placed, Captain Clias explains a course of preparatory exercises, which serves as an introduction. They have a somewhat quackish character, and a few of them seem to us better fitted to make a mountebank than a wrestler.”—“The essential difference between Captain Clias’s system of wrestling and that of the north of England, is this, that

in his, the wrestlers catch hold in any way they choose ; whereas, in the north, each party has an equal and similar hold before the struggle begins. Who can doubt which is the better system ?—The Captain's is radically savage and barbarous, and more congenial with the habits and temper of African negroes than European whites. The other is fair, just, and civilized. To us the sight of one man catching hold of another round the waist, and consequently, throwing him at his pleasure, without the possibility of his antagonist making any effectual resistance, would be sickening indeed. Thus, what true cock of the North can read without disgust Exercise XII. entitled " Of the First Fall ?" " The following exhibition must resemble dog-fighting more than man-wrestling :—' In this exercise the two wrestlers are lying on the ground, one on his right side, and the other on his left, two feet apart, and opposite to each other,' &c.

While we concur in these views as to all that, independent of mere national habits, is really unfair, and as to all that is in any way disgusting or even unseemly, we think the rules of English wrestling might be advantageously extended.

Wrestling ought to be considered not merely as a pastime, which may be subjected at pleasure to the narrowest rules, but as a means of defence, in which all that can properly be called wrestling, and is capable of conferring an advantage, is admissible, because, when used as defence, such advantages would be taken.

If here it be objected, that what is positively unfair or unseemly might be equally advantageous, and should there-

fore be taught,—we answer no ; because that which is here unfair, as the giving a blow, belongs to, and is taught by another art, and ought not to be confounded with this one, and because that which is unseemly need never be taught.

It is with caution, therefore, that we shall follow the continental gymnasiarchs in the extension of old English rules.

To these general observations, we have now to add a few, which are rather more particular, but still regard wrestling, generally considered.

The first care of the wrestler should be to avoid being held by a stronger man.

His next care should be quickly to discover the weakness of his adversary ; always remembering, that weight and strength are of greatly diminished value, when experience and skill are defective.

With this in view, he should then watch every movement of the feet of his antagonist, to throw him when his balance is faulty, when he fails in an attack, or when he is any way disunited.

The rules to be observed in wrestling are :

1st. The wrestlers must either assume the Position in Plate XLV., or advance upon each other in a struggle with the arms.

2d. No grasp is to be made at any part of the dress, face, hair, &c., but only at the body or limbs.

3d. Striking and kicking are utterly inadmissible.

4th. Whenever it is doubtful who is the victor, a plurality of voices must decide it.

5th. These may also applaud, encourage, or censure ; but no one may direct the hands of the wrestlers.

6th. The push and the pull can be decided only when the opponent is unable to resist longer.—The heave is complete, if he be unable to disengage himself.—The throw is decided when one is thrown oftener than the other; or when one throws another without falling himself, or only touching the ground with his hands; or when one is held so firmly down that he can do no more.

THE PUSH.

Plate XLV.

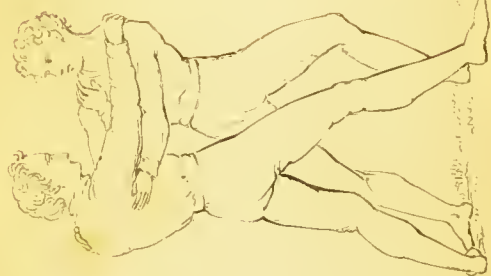
This consists merely in pushing, without trying to throw.

The antagonists seize each other by the arms close to the shoulders, and nearer to their inner than their outer sides, inclining the body forward upon one leg, and keeping the other backward.

If one, when in the above position, possess sufficient power to push the other backward until he is thrown out of the forward and resisting, into a perpendicular position, he is certain to conquer, if he still press him backward with longer steps, and as fast as possible. The latter cannot step backward as quickly as the former gains upon him; he must therefore either fall, or turn himself quickly round for the purpose of flight.











A beautiful Heave practised by the Ancients

THE PULL.

Plate XLVI.

Here, he who attempts to drag away the other, ought to collect all his power, balance himself on the leg behind, bend gently, place his feet sidewise, and pull his antagonist strongly in the suitable direction.

When he who resists loses footing, and cannot maintain his place directly before the other, he must make a pace sidewise—from the right to the left when the right leg is forward, draw thus his antagonist out of balance, and endeavour either to drag him away in his turn, or to regain his own footing.

THE HEAVE.

Here, each wrestler endeavours to introduce his arms between the arms and body of his opponent, to seize him by the middle, to raise him from the ground, and to hold him in that position till he acknowledges his defeat.—Or, one allows the other to seize him by the middle of the body, and the latter tries to hold him fast.

The hold ought to be strong enough to prevent the prisoner's escape, without injuring or throwing him.

For this purpose, he who holds must press his head against his antagonist's breast, and raise up his shoulders as much as possible to prevent the other's movements, and particularly the introduction of his arm between the bodies of both.

It is most important, that he who holds should husband

his strength, as well as follow, with great suppleness, all the movements of him who is held.

The prisoner must endeavour to disengage himself.

In this, however, he must not with his hands touch his antagonist's face, or wring his fingers, or deviate from the rules already laid down.

He must impede his antagonist's progress by extending his arms as firmly against him as possible, and by bending his belly inward, and must thus, if possible, escape being lifted from the ground. He must also try to thrust his hands and the lower parts of his arms between his own body and his antagonist's arms, and then force the latter's hands asunder.

If he disengage himself, he is the conqueror; if not, this honour is due to his antagonist.—(Plate XLVII.)

If the prisoner be unable thus to disengage himself, he must, after leaning to the right in order to introduce the left arm, seize the moment when the other forces it away, to make a movement backward with his head, raise his arms parallel to his ears, throw them forcibly from right to left over the head of his antagonist, and thereby turn himself.

If the prisoner do not succeed in completely turning himself by this movement, he may lean his right fore arm strongly against the nape of the neck of him who holds him, and remain in that position till able to turn and disengage himself.

In the heave, one wrestler may also try to seize both arms of his antagonist from behind, and so pinion him.

For this purpose, to get in the rear of the antagonist is

difficult. It may sometimes, however, be accomplished by springing quickly round and seizing from behind.

Or, he may turn his antagonist completely and quickly round, and then seize him, by giving that shoulder of his antagonist which he presses most forward a quick and violent push, and at the same instant drawing the other shoulder toward him with his other hand; thus turning him somewhat round, and thereby springing more easily behind him.

Or, having seized his antagonist, he may pretend to exert himself in turning the latter round to one side, and instantly change this direction to the opposite side, in which he must turn his opponent with his utmost strength.

Or, instead of seizing his antagonist by both arms, he may rather wait for him, and, in the moment that the latter rushes upon him, slip a little to the side opposed to that where his antagonist's foremost leg comes, grasp his nearest arm quickly, and pull him so forcibly towards him as to be able to seize him from behind.

The prisoner may disengage himself by striking both arms out so forcibly as to break the other's grasp.

A very beautiful heave, known to the ancient wrestlers, is as follows:—At a favorable moment, one seizes the other's left wrist with his right hand, stoops by a step forward with his left leg, grasps his antagonist's knee-joint from within with his left hand, and then, by drawing both his hands forcibly towards him, easily brings him upon his shoulder, thus not only heaving him, but actually carrying him off.—(Plate XLVIII.)

THE THROW.

Here, the object is to lay the opponent on the ground: it being previously settled whether the victory is to be decided by one throw, by several, or by holding the opponent firmly down.

When one has seized the other round the body, he ought to keep his head as close as possible to his highest shoulder, to prevent the other's taking it under his arm, to raise him from the ground, and to push on one side and throw him to the other.

Or, one may endeavour, by means of a grasp of his antagonist's shoulder, to push him over to the left side; and, on his resisting this pressure with all his strength, and labouring towards the right, he may suddenly change the direction of his pressure, viz. to the right, when it is extremely probable that his antagonist will fall on that side.

Or, he may take advantage of the moment when his antagonist advances one of his feet, and throw him down by a trip either backward or forward.

Backward.

This is executed by placing either the right leg outwards behind the right of the antagonist, or the left leg outwards, behind the left leg of the antagonist, and pressing strongly on the breast of him who is to be overthrown.

He who resists ought instantly to disengage his leg, and place it behind.

One may likewise let himself fall to the left, lift quickly from the right, with the top of his foot, the left leg of his antagonist, by tacking it under the calf, and make him fall

on his back, by pulling him with the left hand, and pushing with the right. Or he may fall to the right, lift from the left, &c.

One may, moreover, give a push from left to right, take advantage of that moment to place the end of the right foot exterior to the foot of his antagonist, and then push from right to left, without moving the foot which holds. Or he may give the first push from right to left, &c.

Forward.

One may place the right leg inside the left of the other, or the left inside the right of the other, making, with the point of his foot, the trip on the fore part of his antagonist's leg.

One may also suddenly slip under the other's left arm, place his right leg with the knee bent between the other's legs, and clasp the latter's back with his right arm, in which case the latter will fall over his knee.

These movements must constitute one rapid act.

The exterior trip of the left against the right, and of the right against the left, is given when the antagonist presents one of his legs as a trap.

If it be observed that the antagonist intends the exterior snare, from the right against the right, the left leg should be moved quickly outward, behind that which he presents, and engaging him under the knee, it is to be raised up, drawing towards one with force and rapidity: it is necessary to pull towards us with the left hand, whilst we push with the right.

The blow of the knee is given when an antagonist, bend-

ing backwards, stretches one of his legs forward to overturn. The instant must then be seized, to give him with the knee, behind his, a strong push in that part, and to draw or push him in a contrary direction.

Strength and tallness giving one man great advantage over another, the left arm of the stronger may move away the right of the weaker; the head of the former may press against that of the latter; his right arm may bear down the shoulder of the latter; and he may overthrow him by bending thus the upper part of the body upon the hips.

To resist this attack, the antagonist must lower himself gently, seize with his lower hand the leg of the stronger, pull it forcibly up, put instantly one of his legs behind that on which his antagonist stands, lean the upper part of his body forward, and quickly overthrow him.

Or, as soon as he sees that the other means to press him down, he may move his head back, place his right leg inside the left of his antagonist, lift up the leg, push to the right with the right arm placed across the chin of the stronger, and either overthrow, or raise him from the ground, to overthrow him to either side.

THE MIXED WRESTLE.

In this, the three kinds of wrestling are united. Each wrestler must constantly contrive to push or pull, to heave, or to throw.

His opponent being uncertain of his manœuvre, must increase his vigilance, dexterity, and strength, to give instantly the proper kind of resistance.

He who is first fatigued is vanquished.

BOXING.

UTILITY OF BOXING.

The art of boxing is analogous to the use of the cestus among the Greeks, during the era of their sages and heroes. It was a leathern gauntlet plated with iron, to render the blows more heavy.

The Greeks, as well as the Romans, found the encouragement of gymnastic exercises essential to their national security and honour. They found in it also an invigorator of the public mind, by creating in it a love for whatever is athletic, manly, and brave.

Self-defence, indeed, is essential to the safety of man as a social being; nor is it less requisite to him as an individual.

Now, there is a saying no less old than true—that “nothing is worth doing that is not worth doing well.” If self-defence be at all requisite—if it tend to the protection of life or property—then it is worth acquiring in its natural form, together with all the art it will admit of.

A man’s bare arm is his natural weapon, at all times by his side ready for his protection; and where art is united to muscular strength, it is extremely powerful and efficacious.

That any sanction given to its use will make that use more frequent, is probable. But then it will only substi-

tute it, in common cases, for some more dangerous practice or weapon.

Let a contrast be drawn between the fair contest of the fist, and the modes of fight prevalent even in some parts of this country; or let us contemplate the offensive and defensive forms of attack in foreign countries, and then it will be seen whether a knowledge of pugilism is not a public benefit, as well as an individual security.

In our northern counties, where boxing is but imperfectly understood, and its laws are unknown, they fight up and down; that is, when one gets the other down, he who is uppermost throttles, kicks, or jumps on him who is down, till he has killed or disabled him. This, too, is pretty much the case in Ireland; and indeed, all over the world, except in those parts of England where regulated boxing is in use.

In Ireland, men usually fight with sticks. In this mode of combat, a man may, at the onset, receive a mortal blow, whereas, in boxing, exhaustion frequently causes the weaker party to yield, and "give in;" and thus disputes are settled by a less dangerous, though more protracted mode of fighting. In the same country, owing to ignorance of the generous rules of boxing and the spirit it inspires, a man who conceives himself aggrieved by another does not scruple to waylay him, and murder him with a bludgeon or a pitchfork, or to set fire to his cabin, and burn him or his family in their sleep.

Not less repugnant to humanity are the barbarous contests in some parts of the United States of America. Kicking, biting, and even gouging, disgrace their inhuman

fight. The latter is perpetrated by grappling the head of an opponent, and with the thumbs forcing his eyes out of the sockets. Nor is this all. The following is a short narrative of an American combat.—“A. one morning met B. coming from a fight. ‘Heyday! man (he exclaimed), your eye is hanging on your cheek.’ ‘Yes,’ replied B.; ‘but I guess I’ve been a match for the rascal.’ And holding forth his hand, he exhibited an indubitable proof that with a gripe and a wrench he had . . . his adversary.”

In order further to form a correct judgment on this subject, it is also necessary to reflect on the different modes of assuaging the revengeful passions adopted by the lower orders on the continent. There, it is not unusual to behold the long knife, or the stiletto, carrying with it the mortal castigation of an offence.

What a contrast exists between all these barbarous modes of fighting, and the order which prevails whenever a fight occurs in this country! Here a ring is immediately formed,—seconds to each of the combatants step forward,—the surrounding throng maintain “fair play,”—and the business is settled with as much order and propriety as the circumstances of the case will admit of.

Thus boxing is really useful to society as a refinement in natural combat.—In England, it is really curious and interesting to see the beneficent rules of boxing affecting all the contests even of children. In passing a field at Paddington, I one day observed a juvenile fight. Each antagonist had his second, who, after a round, fell on one knee, and presented the other in the rectangular form

adapted for a seat, to which, at the close of each round, he perseveringly pulled his principal, who sat there puffing and blowing as if he had been engaged in mortal combat. In one of the rounds, one of the principals fell, when the other was instantly withdrawn by his second, and the prostrate one lifted from the ground, and placed on the knee of his second. The amusing part of the battle was, that the fighters seemed to be more worn out by the perpetual and determined interference of the seconds than by the fight itself—nor, though they most exemplarily submitted to it, did they seem to be much comforted by each having his face ever and anon wiped by his second's wet and dirty pocket-handkerchief!

Immoral effects have, however, been imputed to boxing. The gallows, it is said, has been supplied from the ring. But this, it has been well observed, means nothing more in substance than that these venerable institutions are contemporaneous. Pugilism includes nothing essentially vicious or immoral; and if we must reason and decide from abuse, where are we to halt? and what is to become of the bench of bishops?

It is true that boxing-matches, being proscribed meetings unattended by any peace-officer, are particularly favorable to the congregation of thieves and other ruffians. But this is evidently not the fault of the boxing-match, but of the circumstances attending it.—Boxing-matches, however, are not advocated here.

I will not answer, says a friend to boxing, for the purity of the congregation even at a gymnasium or fives' court, (where boxing is merely an instructive display), but I am

bold to risk the opinion, that a blackguard is more likely to acquire a sense of justice and fairness there, than at a love-feast in the recesses of Methodism.

In fact, it is to pugilistic schools, and their displays, that we owe "the whole of that noble system of ethics, or fair play, which distinguishes and elevates our commonalty, and which stern and impartial reason herself must hail as one of the glories of Britain." Hence it is that, in regular combats, may be witnessed the most noble forbearance, in one or other, or both of the contending parties—a forbearance which would do honour to combats of another rank.

To those who decline boxing as vulgar, its advocates sarcastically reply :—There can be no objection to restrict boxing to the vulgar and inferior classes of society, where sensibility and resentments cannot be supposed so refined, so rational, and so permanent, as those of their high-born and educated superiors. In regard to them, we submissively give our assent to the indispensable use of the pistol and small sword, and to the unquestionable rationality of affording to that man who has injured another in the highest degree, the opportunity of conferring on him the inferior injury of depriving him of life.

There is another view of this subject which deserves serious consideration.

Though agriculture, manufactures, commerce, the arts and sciences, constitute the best pursuits of human life, yet a nation exclusively devoted to these, and without the means of defence, would exist in an uncertain, dependent or slavish state. From the inhabitants of every country,

therefore, a portion is selected, whose profession and duty it must be to defend the liberties and secure the property of the whole. Hence the military and naval professions. But, in order to fit the people for these, and to prevent the too general indulgence of effeminacy and dread of enterprize, it is necessary to encourage the manly and athletic sports and contests, which invigorate the human frame, inspire contempt of personal suffering, and enable men to defend that which they could not otherwise enjoy.

There can in fact be no better preparation for making effective combatants in our army and navy than the national practice of boxing. "It teaches a man to look his adversary in the face while fighting; to bear the threatening looks and fierce assaults of an antagonist without flinching; to watch and parry his intended blow; to return it with quickness, and to follow it up with resolution and effect: it habituates him to sustain his courage under bodily suffering; and, when the conflict has ceased, to treat his enemy with humanity. The feeling of superiority which the practice of boxing gives an Englishman over a foreigner in private quarrel, is carried into the field of battle; for the boxer cannot think of turning his back on a foe whom he has always deemed his inferior in combat. To this feeling, and to the habit of fighting from boyhood, hand to hand and face to face, more even than to superior bodily strength and courage, may be reasonably attributed the superiority of English soldiers at the charge—of English sailors in the act of boarding.

PHYSICAL QUALITIES OF BOXERS.

The frames of boxers in general differ, in appearance, from those of most other men. They are formed both for active exertion and for the endurance of suffering in a severe degree. It might indeed almost be said of boxers, as it has been of poets, that a man must be born one. Certainly, if he be not in possession of certain physical peculiarities, he cannot excel in his art.

The eyes of professed pugilists are generally small. Their necks are large. Their arms are muscular, with strong, well-turned shoulders. Their chests are in general expanded; and some of their backs and loins not only exhibit an unusual degree of strength, but a great portion of anatomical beauty. The hips, thighs, and legs of a few are remarkable for symmetry. When boxers do not stand firm on their legs, and are thin about the loins, it indicates weakness; and where anything like struggling occurs in a contest, they frequently lose the battle from want of strength. The hands of pugilists in general are large, and should be firm.

ART ESSENTIAL IN BOXING.

Many intelligent persons have been of opinion that boxing depends more on strength than the use of the sword; but yet it is certain that art is here still more important than strength. Strength, undoubtedly, is what the boxer ought to set out with—it is the fundamental quality; but without art he will have little success. A less degree of

art will prove far more effective than a considerably greater degree of strength. Deficiency of strength may be greatly supplied by art; want of art will have but heavy and unwieldy succour from strength.

The strength of man chiefly consists of the power of his muscles. These, with the bones, form the strings and levers which execute the different motions of the body. Now, by art, a man may give additional force to them, as will be shewn in the sequel.

POSITION OF THE BODY.

The position of the body is of the first and greatest consequence in boxing. Here, the centre of gravity must be well considered; for if, conformably with that, the weight of the body be adjusted, and its proper equilibrium preserved, it will stand much firmer against opposing force.

This, in the first place, depends upon a proper distance between the legs, which is, therefore, the first thing a boxer ought to regard. Without it, indeed, all his efforts will prove abortive.

In order, then, to obtain the true position, the left leg must be advanced some distance before the right.

This places the left side towards the adversary; and it is the true position for the right-handed man, in order that, after having stopped the blow with his left arm, which is a kind of buckler to him, he may have equal readiness and greater power of stepping in with his right-hand's returning blow.

In this position, then, he ought to preserve a considera-

ble but yet easy flexure of the left-knee, that his advances and retreats may be the quicker.

By this flexure, his body is brought so far forward as to have a proper inclination over the left thigh, so that his face makes a perpendicular or straight line with the left-knee; while the right leg and thigh, in a slanting line, strongly prop up the whole body from behind.

In this attitude, the whole body inclines forward, so that we find, from the outside of the right ankle to the shoulder, is formed a straight but inclined line; and this is the strongest position a man can contrive. It is such as we generally use in forcing doors, pushing forward any weight, or resisting strength; for, while we have all the direct force of the right side, the muscles of the left side, which bend the body gently forward, bring over the left thigh the gravitating part, which thus augments the force. If, on the contrary, the body were held erect or upright, a moderate blow on the head or breast would overset it.

Thus, then, the body is supported against all violent efforts. But this is not all: the additional strength acquired by this equilibrium is greatly to the purpose, as will soon be seen.

MODE OF STRIKING.

The body, by the position now described, has the muscles of the right side partly relaxed and partly contracted, whilst those of the left are altogether in a state of contraction; but the reserve made of the muscles of the right side affords so many springs and levers to be employed at discretion.

Now, the nearer, as already said, that a man brings his body to the centre of gravity, the truer line of direction will these and all his other muscles act in, and consequently with greater force.

By thus delivering up the power to the muscles of the left side, which, in a strong contraction, brings the body quicker forward, the motion communicated is so strong, that, if the hand at that moment be firmly shut, and the blow at the same instant pushed forward, in a straight line with the moving body, the shock given by the stroke will be able to overcome a force, not thus artfully contrived, twenty times as great.

Thus is explained the manner in which it is in our power to give additional strength and force to our bodies, so as to render us far superior to men of more natural strength, not seconded by art.

If a man, then, design to strike a hard blow, let him shut his fist as firmly as possible ; for the power of his arm will then be considerably greater than if but slightly closed, and the velocity of his blow will be greatly augmented by it.

The muscles which give this additional force to the arm, in shutting the fist, are the flexors of the fingers, the extensors being the opposite muscles, as they open or expand the same.

In striking, however, or using any violent effort with the hands, these different orders of muscles contribute to the same action. Thus, if any one close the left hand forcibly, and clap his right hand upon the left arm, he will feel that all the muscles of it swell more or less.

Hence it follows, that muscles, calculated for different offices, yet aid each other in great efforts. This is of much advantage toward that artificial force in boxing which beats much superior strength where art is wanting.

MOST EFFECTIVE BLOWS.

We may now consider what are the most hurtful blows, and such as, consequently, contribute most to gaining a battle. This is a most important consideration to pugilists, and claims their particular attention.

Very few of those who fight know why a blow on any particular part has such effects; yet, by experience, they know it has these effects, and by them they are directed to the proper parts—under the ear, between the eyebrows, and about the stomach.

The blow under the ear is considered to be as dangerous as any that is given, if it light between the angle of the lower jaw and the neck; because, in this part, there are two kinds of blood-vessels—arteries and veins, of great size, the former bringing blood immediately from the heart to the head, and the latter carrying it immediately back.

Now, it is evident, that if a man receive a blow on these vessels, part of the blood proceeding from the heart to the head must be forced back, whilst the other part is driven forcibly to the head; and, in the same manner, part of the blood returning from the head to the heart must be forced into the latter, whilst the other is driven forcibly to the head.

Thus, the blood-vessels are immediately overcharged,

and the sinuses of the brain overloaded. The man, accordingly, loses sensation, and the blood often runs from his ears, mouth, and nose, owing to the quantity forced with impetuosity into the smaller vessels, the coats of which being too tender to resist such a charge, instantly break, and cause the effusion of blood wherever the superficial skin is thinnest.

This is not all—the heart, being overcharged with the blood forced back on the succeeding blood ascending from its left ventricle, stops its progress; whilst the blood returning from the head is violently pushed into its right auricle, so that the heart labours under a violent surcharge of blood, which however goes off as the parts recover themselves, and are able to push the blood onward.

Blows between the eyebrows contribute greatly to victory. This part being contused between two hard bodies, viz. the fist and os frontis, there ensues a violent echymosis, or extravasation of blood, which falls immediately into the eyelids, and they being of a lax texture, incapable of resisting this influx of blood, swell almost instantaneously, and this intumescence soon obstructs the sight. The man thus artfully hoodwinked, is consequently beat about at his adversary's discretion.

Blows on the stomach are very hurtful, as the great artery, called aorta, the diaphragm or midriff, and the lungs, share in the injury.

It is, therefore, recommended to those who box, never to chargo their stomachs with much food, on the day of combat. By observing this precaution, they will avoid the extraordinary compression of the descending aorta, and, in

a great measure, preserve the stomach itself from the blows to which it must be the more exposed, when distended with food, and the consequence of which must be a vomiting of blood, caused by the rupture of blood-vessels, whereas, the empty stomach, yielding to the blow, is much less affected by it. Hence it is recommended rather to take some slight stimulant into the comparatively empty stomach, which, by its exciting the fibres, may contract it into smaller compass.

The injury which the diaphragm suffers from blows under the breast-bone, is considerable, because it is thereby brought into a strong convulsive state, which produces pain. Thus excited, the diaphragm also lessens the cavity of the thorax, whereby the lungs are, in a great measure, deprived of their liberty, and the quantity of air retained in them is so forcibly pushed from them, that it causes a difficulty of respiration, which cannot be overcome till the convulsive motion of the diaphragm ceases.

The boxer may render blows on this part in some degree less hurtful, by drawing-in the belly, holding the breath, and bending the thorax, or upper part of the chest over the navel, when the stroke is coming.

BOTTOM.

Strength and art have been both mentioned as the principal requisites for a boxer; but there is another, which is equally necessary, and without which no pugilist can be complete. This is denominated bottom.

In constituting bottom, there are required two things—

wind, and spirit or courage. Wind, indeed, may be obtained by a proper attention to diet and exercise ; but it is spirit that keeps the boxer upon his legs. Without this substantial requisite, both art and strength will be of little avail.

The following rules are nearly those which were drawn up by Mr. Broughton, and which continue to be generally acted upon :

1. That a square of a yard in extent be chalked in the middle of the stage ; and at every fresh set-to, after a fall, or being parted from the rails, each second is to bring his man to the side of the square, and place him opposite to the other, and, till they are fairly set-to at the lines, it shall not be lawful for one to strike the other.

2. That, in every main battle, as soon as the men are stripped, no person whatever shall be upon the stage, except the principals and their seconds ; the same rule being to be observed in by-battles, except that in the latter, a gentleman is allowed to be upon the stage to keep decorum, provided always he do not interfere in the battle ; and whoever presumes to infringe these rules is to be turned immediately out of the place.

3. That no champion is to be deemed beaten, unless he fail in coming, or being brought up by his second, to the side of the square, in the limited time of half a minute ; or that his own second declares him beaten ; but no second is to be allowed to ask his man's adversary any questions, or advise him to give up.

4. That, to prevent disputes, in every main battle, the principals shall, on coming on the stage, choose, from among the gentlemen present, two umpires, who shall absolutely decide all disputes that may arise about the battle; and, if the two umpires cannot agree, the said umpires are to choose a third, who is to determine it.

5. That no person is to hit his adversary when he is down, or seize him by the ham, the breeches, or any part below the waist; a man on his knees being to be reckoned down.

These rules form the code of boxing.

TRAINING.

This is here properly an appendix to various exercises already described.

The art of training for athletic exercises or laborious exertions, consists in purifying the body and strengthening its powers, by certain processes, which are now to be described.

The advantages of training, however, are not confined to pedestrians, wrestlers, or pugilists: they extend to every one; for, were training generally introduced, instead of medicine, for the prevention and cure of diseases, its beneficial consequences would assuredly prolong life, and promote its happiness.

Every physiologist knows that all the parts which compose the human body—solids as well as liquids—are successively absorbed and deposited. Hence ensues a perpe-

tual renovation of them regulated by the nature of our food and general habits.

The health; indeed, of all the parts, and the soundness of their structure, depend on this perpetual absorption and renovation.

Now, nothing so effectually as exercise excites at once absorption and secretion. It accordingly promotes all the vital functions without hurrying them, renovates all the parts, and preserves them apt and fit for their offices.

It follows, then, that health, vigour, and activity, chiefly depend upon exercise and regimen, or, in other words, upon the observance of those rules which constitute the theory of training.

The effect has accordingly corresponded with the cause assigned in this view of the subject, in every instance, where training has been adopted; and, although it is not commonly resorted to as the means of restoring invalids to health, there is every reason to believe, that it would prove effectual in curing many obstinate diseases, such as bilious complaints, obesity, gout, rheumatism, &c.

The ancients entertained this opinion.—They were, says a popular writer on medicine, by no means unacquainted with, or inattentive to, these instruments of medicine, although modern practitioners appear to have no idea of removing disease, or restoring health, but by pouring drugs into the stomach.—Hercdicus is said to have been the first who applied the exercises and regimen of the gymnasium to the removal of disease, or the mainte-

nance of health. Among the Romans, Asclepiades carried this so far, that he is said, by Celsus, almost to have banished the use of internal remedies from his practice. He was the inventor of various modes of exercise and gestation, in Rome.—In his own person, he afforded an excellent example of the wisdom of his rules, and the propriety of his regimen. Pliny tells us that, in early life, he made a public profession, that he would agree to forfeit all pretensions to the name of physician, should he ever suffer from sickness, or die but of old age; and, what is more extraordinary, he fulfilled his promise, for he lived upwards of a century, and at last was killed by a fall down stairs.

As to the locomotive system, modern experience sufficiently proves that exercise is the most powerful strengthener of the muscles, and of every part on which activity depends.

As to the vital system, training, we are told, always appears to benefit the state of the lungs. Indeed, one of its most striking effects is to improve the wind: that is, to enable a man to draw a larger inspiration, and to hold his breath longer.

As to the intellectual system, Sir J. Sinclair observes that, by training, the mental faculties are also improved; the attention being more ready, and the perception more acute, owing probably to the clearness of the stomach, and better digestion.

It must, therefore, be admitted, that the most beneficial consequences to general health arise from training.

The simplicity of the rules of training is assuredly a

great recommendation to a trial of the experiment. The whole process may be resolved into the following principles:—1st, the evacuating, which cleanses the stomach and intestines;—2d, the sweating, which takes off the superfluities of fat and humours;—3d, the daily course of exercise, which improves the wind and strengthens the muscles;—and, lastly, the regimen which nourishes and invigorates the body.

To those who are to engage in corporeal exercises beyond their ordinary powers, training is indispensably necessary. Pedestrians, therefore, who are matched either against others or against time, and pugilists, who engage to fight, must undergo the training process before they contend. The issue of the contest, if their powers be nearly equal, will, in a great measure, depend upon their relative condition, as effected by training, at the hour of trial.

Training was known to the ancients, who paid much attention to the means of augmenting corporeal vigour and activity. Accordingly, among the Greeks and Romans, certain rules of exercise and regimen were prescribed to the candidates for gymnastic celebrity.

We are assured, that, among the Greeks, previously to the solemn contests at the public games, the strictest temperance, sobriety, and regularity in living, were indispensably requisite. The candidates were, at the same time, subjected to daily exercise in the gymnasium, which continued during ten months, and which, with the prescribed regimen, constituted the preparatory training adopted by the athletes of Greece.

Among the Romans, the exercises of the palaestra degenerated from the rank of a liberal art, and became a profession, which was embraced only by the lowest of mankind; the exhibitions of the gladiators being bloody and ferocious spectacles, which evinced the barbarous taste of the people. The combatants, however, were regularly trained by proper exercise, and a strict observance of regimen.

Among them, pure and salubrious air was deemed a chief requisite; and, accordingly, the principal schools of their *athletæ* were established at Capua and Ravenna, the most healthy places in Italy.

Previously to entering on this regimen, the *athletæ* were subjected to the evacuating process, by means of emetics, which they preferred to purgatives.

In the more early stages of training, their diet consisted of dried figs, new cheese, and boiled grain. Afterwards animal food was introduced as a part of the athletic regimen, and pork was preferred to any other. Galen, indeed, asserts, that pork contains more real nutriment than flesh of any other kind which is used as food by man: this fact, he adds, is decidedly proved by the example of the *athletæ*, who, if they lived but for one day on any other kind of food, found their vigour manifestly impaired the next.

The preference given to pork, by the ancients, does not correspond with the practice of modern trainers, who entirely reject it in their regimen: but, in the manner of preparing the food, they exactly agree—roasting or broiling

being by both preferred to boiling; and bread unfermented, to that prepared by leaven.

A very small quantity of liquid was allowed to the *athletæ*; and this was principally water.

The *athletæ* exercised in the open air, and became familiarized, by habit, to every change of the weather, the vicissitudes of which soon ceased to affect them.

To exercise their patience, and accustom them to bear pain without flinching, they were occasionally flogged on the back with the branches of a kind of rhododendron, till the blood flowed. By diminishing the quantity of the circulating liquid, this rough kind of cupping was also considered salutary, as obviating the tendency to plethora or redundancy of blood, to which they were peculiarly liable—a strong proof, by-the-bye, of the nourishing qualities of their food, &c.

When the daily exercises of the *Athletæ* were finished, they were refreshed by immersion in a tepid bath, where the perspiration and sordes—scurf, pustules, or filthy adhesions, were carefully removed from the surface of the body by the use of the strygil.* The skin was then diligently rubbed dry, and again anointed with oil. If thirsty, they were permitted to drink a small quantity of warm water. They then took their principal repast, after which they used no more exercise that day.—They occasionally also went into the cold bath in the morning.

* For this instrument, rough coarse clothes are adopted, but not with advantage.

They were permitted to sleep as many hours as they chose; and great increase of vigour, as well as of bulk, was supposed to be derived from long-continued and sound repose.*

The sexual intercourse was strictly prohibited.

The manner of training among the ancients bears some resemblance to that practised by the moderns. Perhaps it is because their mode of living and general habits were somewhat different from those of the present age, that a difference of treatment is now required to produce the same effects.

The great object of training, for running or boxing matches, is, to increase the muscular strength, and to improve the free action of the lungs, or wind, of the person subjected to the process.

Seeing that the human body is so capable of being altered and renovated, it is not surprising that the art of training should be carried to a degree of perfection almost incredible; and that, by certain processes, the muscular power, the breath (or wind), and the courage of man, should be so greatly improved as to enable him to perform the most severe or laborious undertakings.

That such effects have been produced is unquestionable: they are fully exemplified in the astonishing exploits of our most celebrated pedestrians and pugilists, which are the infallible results of such preparatory discipline.

The skilful trainer attends to the state of the bowels,

* Little sleep is now prescribed; but its quantity should depend upon circumstances of fatigue, &c.

the lungs, and the skin; and he uses such means as will reduce the fat, and, at the same time, invigorate the muscular fibre. The patient is purged by drastic medicines; he is sweated by walking under a load of clothes, and by lying between feather-beds; and his limbs are roughly rubbed. His diet is beef or mutton; his drink strong ale. He is gradually inured to exercise by repeated trials in walking and running.

By extenuating the fat, emptying the cellular substance, hardening the muscular fibre, and improving the breath, a man of the ordinary frame may be made to fight for one hour, with the utmost exertion of strength and courage, or to go over one hundred miles in twenty-four hours.

The most effectual process for training is that practised by Capt. Barclay, which has not only been sanctioned by professional men, but has met with the unqualified approbation of amateurs. We are here, therefore, almost entirely indebted to it for details.

According to this method, the pedestrian, who may be supposed in tolerable condition, enters upon his training with a regular course of physic, which consists of three doses. Glauber's salts are generally preferred; and from one ounce and a half to two ounces are taken each time, with an interval of four days between each dose.

After having gone through the course of physic, he commences his regular exercise, which is gradually increased as he proceeds in the training.

When the object in view is the accomplishment of a pedestrian match, his regular exercise may be from twenty to twenty-four miles a day.

He must rise at five in the morning, run half a mile at the top of his speed up-hill, and then walk six miles at a moderate pace, coming in about seven to breakfast, which should consist of beef-steaks or mutton-chops under-done, with stale bread and old beer.

After breakfast, he must again walk six miles at a moderate pace, and at twelve lie down in bed without his clothes for half an hour.

On getting up, he must walk four miles, and return by four to dinner, which should also be beef-steaks or mutton-chops, with bread and beer, as at breakfast.

Immediately after dinner, he must resume his exercise, by running half a mile at the top of his speed, and walking six miles at a moderate pace.

He takes no more exercise for that day, but retires to bed about eight; and next morning he proceeds in the same manner.

Animal diet, it will be observed, is, according to this system, alone prescribed, and beef and mutton are preferred.

All fat and greasy substances are prohibited, as they induce bile, and consequently injure the stomach.—The lean of meat contains more nourishment than the fat, and, in every case, the most substantial food is preferable to any other kind.

Fresh meat is the most wholesome and nourishing. Salt, spiceries, and all kinds of seasonings, with the exception of vinegar, are prohibited.

The lean, then, of fat beef cooked in steaks, with very little salt, is the best; and it should be rather under-done

than otherwise. Mutton, being reckoned easy of digestion, may be occasionally given, to vary the diet and gratify the taste. The legs of fowls are also esteemed.

It is preferable to have the meat broiled, as much of its nutritive qualities is lost by roasting or boiling. It ought to be dressed so as to remain tender and juicy; for it is by this means that it will be easily digested and afford most nourishment.

Biscuit and stale bread are the only preparations of vegetable matter which are permitted to be given; and every thing inducing flatulency must be carefully avoided.

In general, the quantity of aliment is not limited by the trainer, but left entirely to the discretion of the pedestrian, whose appetite should regulate him in this respect.

With respect to liquors, they must be always taken cold; and home-brewed beer, old, but not bottled, is the best.—A little red wine, however, may be given to those who are not fond of malt liquor; but never more than half a pint after dinner.

It is an established rule to avoid liquids as much as possible, and no more liquor of any kind is allowed to be taken than is merely requisite to quench the thirst.

After having gone on in this regular course for three or four weeks, the pedestrian must take a four-mile sweat, which is produced by running four miles in flannel, at the top of his speed.

Immediately on returning, a hot liquor is prescribed, in order to promote the perspiration, and of this he must drink one English pint. It is termed the sweating liquor, and is composed of one ounce of caraway seed, half an ounce of

coriander seed, one ounce of root-liquorice, and half an ounce of sugar candy, mixed with two bottles of cider, and boiled down to one-half.

He is then put to bed in his flannels, and being covered with six or eight pair of blankets and a feather-bed, must remain in this state from twenty-five to thirty minutes, when he is taken out and rubbed perfectly dry.

Being then well wrapt in his great coat, he walks out gently for two miles, and returns to breakfast, which, on such occasions, should consist of a roasted fowl.—He afterwards proceeds with his usual exercise.

These sweats are continued weekly, till within a few days of the performance of the match, or, in other words, he must undergo three or four of these operations.

If the stomach of the pedestrian be foul, an emetic or two must be given about a week before the conclusion of the training.

He is now supposed to be in the highest condition.

Besides his usual or regular exercise, a person under training ought to employ himself, in the intervals, in every kind of exertion, which tends to activity, such as golf, cricket, bowls, throwing quoits, &c. so that, during the wholeday, both body and mind may be constantly occupied.

Although the chief parts of the training system depend upon sweating, exercise, and feeding, yet the object to be obtained, by the pedestrian, would be defeated, if these were not adjusted, each to the other and to his constitution.

The trainer, before he proceeds to apply his theory, should make himself acquainted with the constitution and habits of his patient, that he may be able to judge how far

he can with safety carry on the different parts of the process.

The nature of the patient's disposition should also be known, that every cause of irritation may be avoided ; for as it requires great patience and perseverance to undergo training, every expedient to soothe and encourage the mind should be adopted.

The skilful trainer will, moreover, constantly study the progress of his art, by observing the effect of its processes, separately and in combination.

If a man retain his health and spirits during the process, improve in wind, and increase in strength, it is certain that the object aimed at will be obtained. But if otherwise, it is to be apprehended that some defect exists, through the unskilfulness or mismanagement of the trainer, which ought instantly to be remedied, by such alterations as the circumstances of the case may demand.

It is evident, therefore, that in many instances the trainer must be guided by his judgment, and that no fixed rules of management can, with absolute certainty, be depended upon, for producing an invariable and determinate result.

In general, however, it may be calculated, that the known rules are adequate to the purpose, if the pedestrian strictly adhere to them, and the trainer bestow a moderate degree of attention to his state and condition during the progress of training.

It is impossible to fix any precise period for the completion of the training process, as it depends upon the previous condition of the pedestrian ; but from two to three

months, in most cases, will be sufficient, especially if he be in tolerable condition at the commencement, and possessed of sufficient perseverance and courage to submit cheerfully to the privations and hardships to which he must unavoidably be subjected.

The criterion by which it may be known whether a man is in good condition, or, what is the same thing, whether he has been properly trained, is the state of the skin, which becomes smooth, elastic and well-coloured, or transparent: the flesh is also firm, and the person trained feels himself light, and full of spirits.

Even, however, in the progress of the training, his condition may be ascertained by the effect of the sweats, which cease to reduce his weight; and by the manner in which he performs one mile at the top of his speed.—It is as difficult to run a mile at the top of one's speed as to walk a hundred; and therefore, if he perform this short distance well, it may be concluded, that his condition is perfect, or that he has derived all the advantages which can possibly result from the training process.

BY THE SAME AUTHOR.

*In the press, and speedily will be published, in one volume,
uniform with this Work,*

LITERARY COMPOSITION.

Every one has felt the difficulty of relating, in writing, even a common EVENT, because the simplest one requires us to decide, whether we shall *first* mention the *time*, or the *place*, or the *actor*, or his *motive*, or the *circumstances* under which he acts, &c. &c. &c.—Every one is more or less puzzled every day in the construction of a common LETTER, which is generally *one large and confused paragraph*, for which, “haste,” and “time for the post,” are the hacknied apologies!—The cause of all this is, that, in education, we jump from rules of GRAMMAR, which are always soon forgotten, to RHETORIC, which is rarely practised, and omit practical COMPOSITION entirely!—The purpose of this work is to supply that defect, *especially as to all daily-recurring and practical purposes*, in which every one suffers more or less, from the entire want of guidance. Nor are the higher purposes of composition, either in prose or poetry, unattended to in this work.

Also in the press, .

THE POLITICAL ALMANAC OF ALL THE EUROPEAN STATES; BEING A PERPETUAL REFERENCE, AND GUIDE TO THE CRITICAL AND USEFUL READING OF NEWSPAPERS: containing an Account of the *Boundaries of these States, considered in a military and political view*; their Extent and Population at the latest periods; the *Character of their Governments, and of the more important Individuals now forming them*; the *present state of Education and Public Opinion in each*; their advances in Agriculture, Manufactures, and Commerce; the most recent details as to their Exports and Imports; the Number, Extent, and Value of their Colonies; the actual strength of their Army and Navy; their Revenue, Expenditure, Debt, Interest, and credit in the money-market; and especially *their Political Relations to each other*: the United States of America being introduced, as affording *the most useful comparison with Great Britain*; and Egypt being added, on account of its increasing importance. Edited by ALEXANDER WALKER; and to be published annually.

